

AIR CORPS NEWS LETTER

ISSUED BY THE OFFICE OF
THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON D. C.

OFFICE OF THE
CHIEF OF THE
AIR CORPS
WASHINGTON
D. C.



The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---c0o---

WE RESUME PUBLICATION

A year ago last October we announced regretfully that circumstances were such as to make it necessary to discontinue the News Letter for the time being. This state of affairs no longer obtains, so now, after a lapse of 14 months, we are happy to announce that, to use an every-day expression, "we are doing business at the old stand", the Chief of the Air Corps having given his approval to the resumption of the News Letter.

There were also several other factors which influenced the decision to resume publication, first and foremost of which was the reorganization of the tactical elements of the Air Corps into the General Headquarters Air Force. With the creation of this new organization, it is naturally to be expected that many problems will arise, the nature of which will be unfamiliar to most officers in the field. It is felt that a publication such as the News Letter can serve a very valuable purpose in maintaining solidarity and community of interests in the Air Corps. With the restrictions upon publicity, the public press cannot be expected to serve as an adequate medium for acquainting Air Corps personnel with the true aspects of incidents transpiring in the Air Corps from time to time. It will be the endeavor to make the News Letter constitute the needed agency for setting forth a true interpretation of Air Corps problems and of disseminating information on matters of vital concern.

Following the suspension of the News Letter, as time went on there was a growing sentiment that there is a real need for a publication of this character to serve the purpose, not only of keeping each Air Corps station in touch with the functions and accomplishments at other stations, but, in thus knitting together the widely separated activities of the Air Corps, prove a moral factor in promoting the interest of its personnel - by strengthening the feeling that they are an integral part of one system, all interested in the same objects and striving towards the same end. The problems of the Air Corps are many and varied. For many of them no precedent can be found upon which to base the solution. Since one person's ideas may inspire ideas in others, a round-table discussion on aviation matters carried on in the pages of the News Letter will, perhaps, afford a source of aid in the practical solution of our Air Corps problems.

It is hoped to start the new year with a News Letter which will prove of maximum interest and benefit to all Air Corps personnel. This is its primary purpose, but experience has also shown that the News Letter can serve as an excellent medium of information to civilians interested in aviation. The people have a right to know what progress is being made in the air arm of the military forces of this nation, and such interest on their part should by all means be encouraged.

Among the material which will appear in the News Letter will be late changes of policy in aviation; the latest orders on changes in personnel or stations; projected activities; new types of airplanes being contracted for; items of interest in technical developments at the Materiel Division; outstanding flight achievements; developments in Congress with respect to the

Air Corps, and notes of interest regarding activities at Air Corps fields and stations.

Having thus set forth the aims and purposes of the News Letter, let it be said here as emphatically as words can convey the meaning that cooperation is a prime necessity. It is absolutely essential to have the whole-hearted and enthusiastic cooperation of all Air Corps personnel - post commanders, other officers and enlisted men - in order that the News Letter can accomplish what it is setting out to do. Our aim is to serve you, but in order to do so we must have your assistance.

Every officer or enlisted man in the Air Corps, Air Reserve or National Guard Air Corps who has new ideas on operation, supply, maintenance, or anything else having to do with flying units is cordially invited to take advantage of the News Letter as the medium for presenting his ideas. For example, any officer who believes he has an outstanding maintenance system should write about it in the News Letter, thereby giving others the benefit of his experience for the good of the service generally. Many a post commander at an Air Corps field thinks he has the best organization ever assembled. Why? Everybody wants to know. Perhaps some crew chief thinks his crew is the best that ever rustled a wing or hefted a wrench. Why? Tell it in the News Letter, and perhaps someone else will wake up and try to steal his stuff, which is what we want them to do for the sake of efficiency.

The News Letter requests every commanding officer to assign to a suitably qualified officer the task of preparing and forwarding regularly material for the Air Corps News Letter. This material should be prepared in narrative form to attract and hold the attention of the reader. Endeavor will be made to issue the News Letter twice a month, and correspondents should forward their contribution of material for this publication to the Office of the Chief of the Air Corps on the 5th and 20th of every month.

It is desired to make every page of the News Letter informative as well as interesting, and it is far better to have a small and snappy publication with good, juicy meat in it than a bulky one which is merely skimmed over by the reader and then cast aside as being unworthy to spend any time to give it a thorough reading.

The success of the News Letter will depend in a large measure on the whole-hearted endeavors of its correspondents in the field, and with their cooperation, as well as that of every post commander and all other Air Corps personnel, it will be possible to produce a publication of value and interest which will reflect real credit on the Air Corps.

We extend to all Air Corps personnel best wishes for a most happy and prosperous New Year and close with the hope that 1935 will prove a banner year in the history of the Air Corps.

---oOo---

RADIO COMMUNICATION ON LONG DISTANCE FLIGHTS

Radio communication on the special flight from the West to the East Coast incident to the Command Post Exercise at Fort Monmouth, N.J., which is mentioned elsewhere in this issue of the News Letter, was mainly with the airways radio stations of the Department of Commerce. The Flight was never out of communication with at least one of these stations. Fine cooperation was extended by the personnel furnishing this communication service. The Flight was able to obtain all the weather information available several hundred miles in advance. It was possible to arrange for servicing, parking, hotel accommodations, transportation, meals, etc., while in flight. This was important, as the destination was sometimes changed en route or just a few minutes prior to take-off.

The Department of Commerce airways radio stations guard 3105 Kilocycles (96.15 meters), and this frequency was used throughout the mission. During a practice flight in the vicinity of March Field, the Flight communicated with an Air Corps station in Panama on 4220 Kilocycles (71.05 meters).

---oOo---

GREETINGS FROM GENERAL FOULOIS TO ALL AIR CORPS PERSONNEL
Through the medium of the Air Corps News Letter

I desire to extend the heartiest and best wishes for 1935 to each and everyone of the Air Corps personnel.

I have had the publication of the Air Corps News Letter resumed, in order to promote a continuation of the same fine spirit of cooperation that has always existed in our organization as a whole.

The prospects for success in attaining many of the objects for which we have labored together for many years have never appeared brighter. With the organization of the General Headquarters Air Force, we may hope to secure a closely knit, uniformly trained fighting force capable of carrying out, under the direction of the Commanding General in the field, the strategical mission of the Air Corps to meet and repel air attacks against the continental United States, and to participate with other Army forces in meeting and repelling attacks of ground and naval surface forces against our coasts and borders, or within our territory.

With the added funds included for the Air Corps in the 1936 Fiscal Year budget recommendation of the President, more ample and suitable equipment can be secured for all our units and activities. The year ahead offers splendid opportunities for great accomplishments in the Air Corps, and I invite all our personnel to participate therein by the fullest display of proper initiative and devotion to professional duties.

B. D. Foulois,
Major General, Air Corps,
Chief of the Air Corps.

---oOo---

NEW ASSISTANT TO CHIEF OF THE AIR CORPS

Lieut. Colonel Augustine W. Robins, Air Corps, was named last week for appointment to the rank of Brigadier General and Assistant Chief of the Air Corps.

Col. Robins is a native of Virginia and was born at Gloucester on September 29, 1882. He attended high school at Richmond, Va., and was then appointed to the United States Military Academy, West Point, N.Y. Upon his graduation on June 14, 1907, he was appointed a second lieutenant and was assigned to the 12th Cavalry. He was promoted to first lieutenant on September 13, 1913, and to Captain on January 23, 1917. He graduated from the Mounted Service School, Fort Riley, Kansas, in 1916.

On August 5, 1917, he was appointed Major (temporary) Signal Corps, and assigned to duty at Scott Field, Belleville, Ill., on September 22, 1917. On December 19, 1917, he was transferred to Park Field, Millington, Tenn., where he continued the flying training he began at Scott Field. He completed the prescribed tests for the rating of Reserve Military Aviator and, on August 9, 1918, he received the advanced rating of Junior Military Aviator. He was promoted to Lieut. Colonel on August 20, 1918.

On October 9, 1918, Col. Robins took station at Indianapolis, Ind., and assumed the duty of District Supervisor for the Northern District. Transferred to the Office of the Director of Air Service, Washington, D.C., January 30, 1919, he served in various capacities, such as Assistant to the Chief of the Property Division, Chief of the Requirements Division and Assistant to the Chief of the Supply Group until August 2, 1921, when he was transferred to Fairfield, Ohio, and assumed the duty of Commanding Officer. He remained at Fairfield until June, 1926, when he was

transferred to the Advanced Flying School, Kelly Field, Texas, as student for the Special Observers Course. He completed this training on September 7th and was rated Airplane Observer, effective September 30, 1926.

Returning to Fairfield, he remained on duty there until his assignment as student officer at the Air Corps Tactical School, Langley Field Va., in August, 1928. Upon his graduation in June of the following year, he was assigned to the command of the San Antonio Air Depot at Duncan Field, Texas. In November, 1931, he was assigned to duty at the Materiel Division at Wright Field, Dayton, Ohio, and served there for nearly two years, when he was detailed as student at the Army Industrial College, Washington, D.C. Graduating therefrom in June, 1934, he was detailed to his present duty as student officer at the Army War College, Washington, D.C.

Colonel Robins reverted to the rank of Major, Regular Army, on July 1, 1920, and was promoted Lieut. Colonel, Regular Army, January 4, 1931.

---oOo---

NEW AIR CORPS MAPS

Two new maps are planned for use of Air Corps Pilots. These maps will cover the following areas: Map No. 38A, will combine 5 present Air Corps Strip Maps, as follows: No. 17, Yuma to Los Angeles; No. 31, Nogales, Tucson to Phoenix; No. 32, San Diego to Phoenix; No. 38, San Diego to Tucson; and No. 39, Los Angeles to San Diego. The new map will be on a scale of 1/750,000 and will include all the area formerly covered by the 5 strips.

Map No. 59 will be a new compilation covering the route from Washington, D.C. to Charles-S.C. and Savannah, Ga., via Richmond, Va., Ft. Bragg, N.C. This new map will serve the route to Miami, Fla. which at the present time necessitates using 4 maps from Washington, D.C. to Savannah, Ga.

I welcome the opportunity afforded to me by the Air Corps News Letter to extend in this first issue a New Year's Greeting to the units of the G. H. Q. Air Force, as well as to all Air Corps personnel, all of whom will play an essential part in making the Air Force a success.

The period until March 1st, the effective date of the organization of the Air Force, will be utilized in organizing a staff and preparing a general plan of operation. The Air Corps personnel to be assigned to the various station complements will naturally have the very closest relations with our Air Force people. The complete cooperation of the station complements will be an important factor in securing successful operation.

The relationships with all Air Corps activities not included in the G. H. Q. Air Force will not differ in essential details from those which have always obtained. It will be my constant effort to promote the fullest understanding on the part of all concerned in working out our mutual problems and responsibilities. The Chief of the Air Corps has assured me of his cooperation to secure this result, so that there is every reason to believe that teamwork in the Air Corps, as a whole, will be maintained at its present high standard.

I can not say very much at present as to my plans. However, one of the early objectives to be attained will be to equip and train all Air Force units so that they may be able to be self-supporting for more or less extended periods of time separated from their bases. Eventually our wings and groups should become familiar, as organizations, with operating conditions throughout the whole United States.

F. M. Andrews,
Lt. Colonel, G. S.

---oOo---

ARMY AIR CORPS WINTER TEST FLIGHTS

The Secretary of War, Honorable George H. Dern, upon recommendation of the Chief of Staff, General Douglas MacArthur, has approved plans covering a series of mid-winter test flights by the Air Corps in the North-central section of the United States. Major Ralph Royce, Air Corps, Commanding Officer of the First Pursuit Group, Selfridge Field, Michigan, will lead a group of 18 airplanes of the latest types during the latter part of January in flights extending over a period of about one month. It is planned to establish the base of operations at Duluth, Minnesota, conduct various test flights in that locality for about three weeks, and terminate the tests with an extended flight to Great Falls, Montana, and return to Selfridge Field. As the characterization of these flights indicates, their purpose will be to make a thorough test of Air Corps equipment to determine its suitability while conducting operations under sub-zero weather conditions. The airplanes to be utilized in this flight are the newest types and representative of the various classes of Air Corps flying equipment.

Five years ago, in January, 1930, the First Pursuit Group participated in what was termed the "Arctic Patrol Flight", also under the command of Major Royce. This flight of 21 Pursuit airplanes traversed the area from Selfridge Field to Spokane, Washington, and return, under the most severe weather conditions, during the course of which the Army pilots experienced many hardships due to the intense cold. For his leadership on this occasion, Major Royce was subsequently awarded the Mackay Trophy, this flight being considered the most meritorious one performed by the Air Corps during that year.

Based upon the data obtained as a result of this flight, experiments with new equipment designed to improve cold weather operation

were carried on at the Materiel Division at Wright Field, under the Equipment Branch and the Airplane Branch, with 1st Lieutenant Alden R. Crawford, Air Corps, acting as Project Engineer in most cases. The equipment thus developed was service-tested by the First Pursuit Group during the winters of 1931-1932 and 1932-1933 with Major Adlai E. Gilkeson, Air Corps, in charge of many of the tests. As a result of these tests and the information gained, further improvements were incorporated in the experimental equipment which is now ready for a further test.

While the previous tests were restricted to Pursuit airplanes, the forthcoming mid-winter expedition to the Northwest will include tactical airplanes of all the classes, organized into a skeletonized composite group, comprising 3 Boeing P-26 Pursuit planes and 3 Boeing F-12K Pursuit planes, 4 Martin B-12 Bombers, 3 Douglas C-43 Observation planes, 3 Curtiss A-12 Attack planes and 2 Bellanca C-27 Transport planes.

Among the equipment which will undergo a thorough test under conditions approximating that of the Arctic regions will be wheel skis, a landing gear combination of a wheel and a ski adapted for landing on both bare and snow covered ground; devices for starting engines in zero weather, such as fire pots, blow torches and engine heaters; engine covers; flying clothing, such as jackets, trousers, vests, boots, helmets, etc.; power plant installations; priming fluids, gasoline and oil. Field shelters will also be provided for the personnel.

The personnel of the flight, including the Commanding Officer and a Flight Surgeon, will consist of 20 officers and 27 enlisted men. Of the Officers, all but two, the Flight Surgeon and the photographer, will pilot airplanes.

A number of the airplanes will be equipped with radio transmitting and receiving

V-5714, A.C.

sets, and all of them will have the required number of standard flight instruments, supplemented by such other instruments as may be decided upon by the Air Corps Material Division at Wright Field, Dayton, Ohio.

The War Department has arranged the forthcoming tests in order that the equipment may be perfected as the result of practical operating tests under severe conditions of cold weather.

---cOo---

THE CATERPILLAR CLUB

There is at least one organization whose progress is always upwards, the famed mythical Caterpillar Club, composed of men and women who made forced parachute jumps. The end of the calendar year 1934 saw 688 names on the Caterpillar Club Register, comprising personnel classified as follows: Air Corps officers, 134; enlisted men, 67; Air Reserve officers, 71; Medical Reserve Corps officers, 1; officers of other branches of the Regular Army, 4; Flying Cadets, Air Corps, 39; National Guard officers, 11; National Guard enlisted men, 6; officers of the U.S. Navy, 38; enlisted men, U.S. Navy, 22; Naval Reserve officers, 5; Naval Reserve enlisted men, 2; officers, U.S. Marine Corps, 20; enlisted men, U.S. Marine Corps, 11; Marine Corps Reserve officers, 3; civilian air mail pilots, 30; other civilians, 204.

Included in the list of 688 names are 28 Caterpillars, each of whom made two jumps; Captain Frank O'D. Hunter, Air Corps, made three jumps, and the Chief Caterpillar of them all, Colonel Charles A. Lindbergh, carries four degrees, so that altogether a total of 721 life-saving jumps have thus far been made in this country. These figures have been compiled from reports of jumps gathered from various sources but there is no guarantee that they are correct, since it has not been possible to make an accurate check on emergency jumps made by civilian flyers.

The Register of the Caterpillar Club shows jumps by calendar years, as follows:

1919 - 22	1926 - 17	1931 - 99
1920 - 1	1927 - 40	1932 - 94
1922 - 2	1928 - 46	1933 - 92
1924 - 10	1929 - 92	1934 - 79
1925 - 13	1930 - 134	

In perusing reports which have been made on recent parachute jumps, incidents are noted which warrant their being passed on to the author of the daily "Believe It or Not" cartoon. Flying Cadet Anthony G. Eubanks, recently initiated into the Caterpillar Club when forced to jump from a Bomber which was rapidly losing altitude when the left motor cut out while flying over mountainous country, stated that he remembered nothing from the moment he bailed out of the plane until he regained consciousness lying on the ground. He had no recollection of pulling the rip cord of his parachute nor of landing in the small clearing which met his gaze when he came to.

This would seem to add testimony to any assertion which may have been made that the mind works subconsciously at times.

Lieut. Julius E. Flock, flying in the vicinity of Fowlerton, Texas, and forced to jump when his motor started to disintegrate, set sail with his parachute for terra firma only to view with alarm that cactus plants were everywhere below him. He had to make the best of a bad situation, and the injuries he sustained upon landing were minor but very uncomfortable. Caterpillars have landed on barbed wire fences, one of them being Col. Lindbergh. Whether barbed wire is more painful than cactus thorns is a moot question, but it is said that cactus thorns cause infection.

Second Lieut. LeRoy A. Rainey and Pvt. Arthur Prestridge had a rather exciting experience when they were forced to jump from an Attack plane due to the failure of the engine crankshaft. Long streams of fire burst from all around the engine and especially from the exhaust stacks and from the bottom portions of the engine. Lieut. Rainey started rocking the wings as a signal for his passenger to jump and at the same time began rolling both flaps and stabilizer. The passenger did not jump, and when the pilot could no longer stick to the controls because of the heat and smoke he stood up in the cockpit, pushed back his goggles and waved the passenger to get out. As Pvt. Prestridge started over the side, flames seemed to burst from all over the ship.

Lieut. Rainey got out on the left side, placing his foot on the top of the cockpit and jumping far and high enough to lead him to believe that he would clear the vertical fin and the landing wires. His jump was not high enough and he hit the landing wires with his stomach and right leg. Crawling out on the wing in preparation for another jump was impossible, as streams of fire completely engulfed the wings and the side of the fuselage.

When Lieut. Rainey hit the landing wires, he said that everything went black and he was trying to get his breath. When he saw the ground rushing at him, he pulled the ripcord of the parachute. A moment later he received a hard jolt and he settled in the top of a large tree where he relaxed for some time until he could get rid of his nausea and regain his breath.

He learned later that his passenger had been riding with the cover over the rear cockpit closed; that when he heard the engine trouble and noticed the rocking of the wings he pushed the cover back and started to jump, but the wind caught under the cover and blew it shut, knocking him flat in the bottom of the cockpit.

Pvt. Prestridge stated that the flames burned his left hand and face. When he pushed the cockpit cover forward again, he dived to the right side of the cockpit, head down, right hand in front, left hand holding the cockpit cover forward and his back towards the front of the airplane. As soon as he was in mid-air the force of the wind turned him around in the air and his legs were struck by the leading edge of the stabilizer. As soon as he turned a few somersaults he pulled the rip cord.

"I was suffering from the burns", he stated. "Every movement of my body seemed automatic and without effort. The blow on my legs did not seem to hurt, and it was a pleasant sensation, such as I experienced when diving from a springboard into a swimming pool. After I pulled the rip cord and was coasting towards the ground the sight of the pilot, who had not opened his parachute yet did not look so pleasant. As soon as his chute opened I glanced back to the flaming and roaring airplane that crashed through the trees to the ground."

Flying Cadet Fay W. Olmstead chose an unusual way of leaving his airplane when the time came for him to make a forced jump. The ailerons of the Boeing Airplane set a very bad fluttering after hitting very rough air currents. At the time he was riding in the "jum" seat just forward of the co-pilot. When the airplane started the violent fluttering or vibrating, he got down from the seat and watched the ailerons through the side windows in the radio operator's compartment. The entire airplane was vibrating badly and he saw a section of the right aileron tear off. Making his way forward from the radio operator's compartment to the front of the bomb bay, he stood on the bomb bay doors and grabbed the emergency release cable leading from the pilot's cockpit. When he pulled the cable, the bomb bay doors fell open and he fell out of the airplane, feet first, and turned over so that when the parachute opened he was falling head down. The opening of the parachute corrected his position, though not very gently.

At the time the ailerons started fluttering, the airplane was at an altitude of 9,500 feet. Cadet Olmstead stated that while descending after the parachute opened he had a feeling of "dangling in the air" until close to the ground, when it seemed to come up at him very rapidly.

Twice 2nd Lieut. Sydney D. Grubbs, Jr., attempted to leave his Pursuit plane, which failed to respond to the controls during a spin, and each time he was thrown back into the seat. Finally, by bracing both elbows on the side of the cockpit and placing his heels on the edge of the seat, he was able to pull himself over the left side of the airplane.

"After freeing myself from the airplane," Lieut. Grubbs stated, "I remember reaching for the rip cord. I remember nothing more until I came to later in the presence of a farmer. The tail surfaces hit me a hard blow on the side of the head. Yellow paint was found on the helmet and, although the helmet wasn't torn, my ear was split open severely."

---oOo---

GUARDING THE 3105 KILOCYCLE FREQUENCY

An announcement was made in a recent issue of the Air Commerce Bulletin, published by the Bureau of Air Commerce, Department of Commerce, to the effect that beginning January 1, 1935, a continuous receiving watch will be maintained on 3,105 kilocycles by all Department of Commerce stations where facilities for radio communication with air-

craft are available, and that it is contemplated that each radio station will be provided with a spare radio receiver on or before January 1, 1935, which will be utilized to guard the day and night air transport companies chain frequencies which are in use on the airway where the station is located. The announcement goes on to say:

"On airways where more than one air transport radio chain frequency is in simultaneous use, the radio receiving watch shall be alternated between them to coincide with the transmitting frequency being utilized by the aircraft nearest to the station. Transport companies desiring their chain frequency channels to be thus guarded should keep airways district offices informed concerning the frequencies in use, the time of the daily shifts from day to night frequencies, etc. All arrangements shall be effected with the express understanding that the listening watch on 3,105 kilocycles is continuous and will be accorded preference in the event of failure involving one of the radio receivers at the radio station.

"It is contemplated that all two-way plane-to-ground communications with Department of Commerce airway stations will be conducted on 3,105 kilocycles as soon as all aircraft are equipped for use of this national calling frequency. It is felt, however, that ground personnel should also follow as closely as possible all radio communications involving aircraft in flight over their own sector of the airway. By so doing, they may trace the progress of flights and thereby anticipate the pilot's requirements both as to weather information and ground service."

According to the December 26th issue of the "Weekly Notices to Airmen", published by the Bureau of Air Commerce, the plan to have Bureau of Air Commerce Radio stations stand continuous listening watches on 3,105 kilocycles after January 1, 1935, has been deferred to a later date pending the acquisition of the necessary additional equipment. The present system of maintaining listening watches on air transport chain frequencies and on 3,105 kilocycles on request will be continued until further notice.

---oOo---

ARMY AERONAUTICAL MUSEUM RECEIVES MCCOY PAPERS

Mrs. Florence L. McCoy, the widow of former Major James C. McCoy, has just presented to the Army Aeronautical Museum at the Materiel Division, Wright Field, Dayton, Ohio, a valuable collection of war medals, aeronautical documents, and photographs pertaining to early days of the American Air Service.

Among the large number of photographs one of particular interest was taken in October, 1907, and shows the Balloon Detachment of the Signal Corps at that time. One of the men in the picture, Private Vernon L. Burge, is still in the Army now holding the rank of Major, Air Corps.

Major McCoy played an important part in the development of aeronautics in the Un-

ited States. He was one of the founders of the Aero Club of America. He received his balloon training in France and later received the American Spherical Balloon Pilot License No. 1. He was prominently identified with aeronautics for a number of years and when the United States entered the World War he was commissioned Major, Aviation Section, Signal Corps.

Major McCoy's papers are a valuable addition to the historical manuscript collection of the Army Aeronautical Museum.

---c0c---

BILL INTRODUCED FOR CONSTRUCTION WORK AT CHANUTE FIELD

A Bill, calling for a total appropriation of \$5,205,500 for construction work at Chanut Field, Rantoul, Ill., was introduced on January 3, 1935, in the House of Representatives by the Hon. D.C. Dobbins, Member of Congress from Illinois.

This Bill (H.R. 1012) reads as follows:

"A BILL

To authorize appropriations for construction of buildings, utilities and appurtenances thereto, for the Air Corps Technical School at Chanut Field, Illinois.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is authorized to be appropriated, to be expended under the direction of the Secretary of War, for the purpose of necessary construction work for the Army Air Corps Technical School at Chanut Field, Illinois, the following sums: \$955,000 for barracks; \$417,000 for noncommissioned officers' quarters; \$1,012,000 for officers' quarters; \$100,000 for hospital; \$345,000 for hangars; \$30,000 for paved aprons; \$748,500 for central heating plant; \$101,000 for improvements in landing field; \$25,000 for telephone construction; \$50,000 for fire and guard house; \$40,000 for garage; \$45,000 for quartermaster's warehouse; \$5,000 for quartermaster's gasoline storage; \$40,000 for quartermaster's maintenance building; \$400,000 for mechanics' school and test stands; \$150,000 for communications school; \$150,000 for photographic school; \$116,000 for armament school; \$30,000 for photographic installations; \$70,000 for Air Corps warehouses; \$60,000 for officers' mess; \$10,000 for paint, oil, and dope warehouse; \$15,000 for bomb storage; \$6,000 for machine gun range; \$75,000 for gymnasium; \$100,000 for headquarters administration building; and \$20,000 for gasoline-storage system; in all, \$5,205,500."

This Bill was referred to the Committee on Military Affairs.

---c0c---

WAR DEPARTMENT ORDERS

1st Lieut. Dixon M. Allison to Selfridge Field, Mich., upon completion of tour of duty in Panama Department.

2nd Lieut. John W. Darrah, Jr., Cavalry, relieved from detail in the Air Corps, to 1st Cavalry Division, Fort Brown, Texas.

Captain Philip Schneberger to San Francisco, Calif., as Air Corps Procurement Planning Representative for San Francisco District upon completion of tour of duty in Hawaiian Department.

---c0c---

OKLAHOMA FAMILY HOSTS TO AIR CORPS PILOT

In fog and rain of sufficient intensity to delay all airplane movements in the vicinity of Barksdale Field, La. and Texarkana, Texas, for two days, an Air Corps pilot found himself noseing into very dangerous flying conditions in Southeastern Oklahoma. Possibly he had not watched the weather actions carefully enough but, at any rate, he found his retreat to emergency fields completely cut off, so he looked around a bit and landed in an open hay field, evidently glad to get down anywhere.

The field proved to be a good one, and Lt. Mills, the pilot, reported that with a little care an entire Group could be safely landed there. It is located about two miles southeast of Villiont, Oklahoma, and about four miles north of the Red River. Now a most important feature of this location is the presence of the home of the farmer, Mr. Roy Roberts. For two days while the fog persisted, Mr. and Mrs. Roberts and the four younger Roberts, sheltered, fed and entertained the Lieutenant while Joseph Napoleon, right hand man, faithfully guarded the plane. Each morning the pilot would march bravely to the plane, shoo off the curiously-inclined big red bull, take a look at the dim outline of the fence a few rods away, and rush back to a comfortable chair in front of a blazing fireplace to listen to Indian and ranch stories of early Oklahoma.

Such hospitality among the dwellers of the great open spaces is not unusual, but in each case a real service has been rendered the Air Corps and a little closer bond between the Army and the civilian population has been formed. Everything the farm afforded, from its telephone to its eight white mules, was placed at the command of the visitor, who gained four pounds during his stay.

P.S. The writer reported to us that the tool kit and the pair of big rubbers he always carries on extended trips were worth their weight in platinum to him.

---c0c---

DISTRIBUTION OF THE NEWS LETTER

The Information Division, Office of the Chief of the Air Corps, invites suggestions from Commanding Officers of Air Corps fields as to the most advantageous distribution of the News Letter to the personnel of their commands. Strict economy is necessary in the publication of the News Letter and suggestions are desired as to the minimum number of copies which should be allotted to each organization at a field to insure satisfactory circulation of the News Letter to all personnel.

IN MEMORIAM

Fourteen Air Corps officers departed to the Great Beyond during the past calendar year, among whom were a number of veteran pilots who were well known not only throughout the Air Corps but also in the field of aviation generally. They have left a void in the ranks of the Air Corps which it will be hard to fill and, in some instances, impossible to fill.

The officers who passed away were Lieut.-Col. Horace M. Hickam, Captains Wendell H. Brockley, Robert E. Selff, John G. Whitesides, 1st Lts. William H. Doolittle, John A. Kase, Frederick I. Patrick, Otto Wienecke, 2nd Lieuts. Frank L. Howard, Arthur R. Kerwin, John W. Stribling, Jr., Durward O. Lowry, Robert A. Brunt and Herbert C. Gibner. The veteran flyers who were with the Air Corps during and since the war were Colonel Hickam, Captains Brockley, Whitesides, Selff, Lieuts. Patrick and Kase.

Captain Brockley, who spent a considerable part of his commissioned service at the Air Corps Materiel Division at Wright Field, and for some years was test pilot, was generally considered one of the most expert pilots in the Air Corps. He was on duty in the Materiel Division Liaison Section, Office of the Chief of the Air Corps, at the time of his death. Captain Selff had also served a tour of duty in the Liaison Section, following which he was assigned to duty on the west coast.

Lieut.-Colonel Hickam, whose last assignment was that of Commanding Officer of the Third Attack Group at Fort Crockett, Galveston, Texas, was the first Chief of the Information Division upon the creation of the Office of the Director of Air Service. He was the father of the Air Corps News Letter and, perhaps because we knew him so well, his untimely death came as a very great shock. A gentleman in the full sense of the word and of an extremely lovable disposition, he made friends wherever he went, and those friends now sadly miss him. He was kind and considerate at all times and invariably had a cheerful word for everyone. Let it not be assumed that he was above issuing reprimands where they were deserved. He did this to the Queen's taste and in a highly colorful fashion, but whenever he took anyone to task his words bore no sting and, best of all, he would dismiss the incident from his mind almost instantly, and if he saw you shortly afterwards he would have the same kindly, cheerful word for you. One remarked about him that "He's the only man who could cuss me out and make me like it."

Of a keen, alert mind, Colonel Hickam, a most outstanding officer, who commanded the utmost respect and the highest admiration of all with whom he came in contact, was the type of leader whom men would follow and fight for to the last gasp. It is not given to every man to possess all these admirable attributes, and the high esteem in which he was held by everyone who was fortunate to know him may readily have been surmised by an outsider had he been present at the Arlington National Cemetery on November 10th, that sad day when his remains were laid to rest, and observed the very large gathering present to pay him their last

respects.

As a token of their esteem, the Galveston Chapter of the Reserve Officers' Association drafted the following Resolution:

"WHEREAS, Our Supreme Commander in Chief has summoned from our ranks for duty on the Eternal Staff Lt. Col. Horace M. Hickam, a gallant officer of the Air Corps, a man who exemplified in every degree the highest attributes of the American gentleman who gives his all to his Country and

WHEREAS, His departure leaves us impressed with the greatness of his leadership, the kindly and considerate care he exercised for the men of his command and his untiring efforts to be of service to his community as well as to his nation

THEREFORE, The Galveston Chapter, Reserve Officers Association, in meeting assembled, do draft this resolution of respect and of sympathy and commend our members to follow the example of this brother officer so that when the Sublime Celestial Bugler rings out his cheery notes we may find ourselves prepared, as he was, to report to Supreme Headquarters ready for duty - and

We direct our Secretary to spread a copy of this resolution on the minutes of our meeting, that the original be sent to the bereaved family, a copy to the Secretary of War, a copy to the Chief of Air Corps and copies to the Commanding General, Eighth Corps Area, and the Adjutant, Fort Crockett.

Ed. M. Owens,

Capt. O.R.C., President."

The Galveston Chamber of Commerce by a standing vote unanimously adopted the following resolution:

"WHEREAS, It has pleased Almighty God in His Infinite Wisdom to call unto Him our friend and associate, Horace M. Hickam, Lieut.-Col. Air Corps, United States Army - a man of highest military ability and accomplishment and sterling personal integrity - a patriot, leader and soldier.

AND WHEREAS - during his association with this body he was at all times untiring in his efforts in behalf of all civic activities and betterments, and always extended his cooperation and that of his command,

AND WHEREAS, the fading note of taps brings the realization of an irreparable loss to the City of Galveston,

NOW THEREFORE BE IT RESOLVED, that the Galveston Chamber of Commerce, acting by and through its Military Affairs Committee, officially records its deep sympathy and regret for his untimely death.

AND BE IT FURTHER RESOLVED that sympathy be extended to the members of his family, and copies of this resolution be delivered to them; to the Commanding Officer, Fort Crockett, Texas; The Commanding General, Eighth Corps Area, Fort Sam Houston, Texas; the Chief of Air Corps, United States Army, Washington, D.C.; and the Secretary of War, Washington, D.C.

GALVESTON CHAMBER OF COMMERCE,

G. G. Moore,

President."

This compendium of information relating to the Army Air Corps and covering the past year is issued for the information and convenience of those desiring to compile special articles upon any of the subjects contained therein. It is not intended to be comprehensive on any of the subjects treated, but merely to form a summary of the topics of information available. It is also intended to be sufficiently comprehensive to form basic information in any popular write-up concerning the history of the Air Corps.

THE ARMY AIR CORPS FOR 1934

Improved flying efficiency, marked development of aircraft and accessories thereto, aids to flying, outstanding flight performances, construction of barracks, quarters, warehouses and other buildings at fields and stations, improvement of landing fields, etc., were among the leading factors which contributed to the substantial progress made by the Air Corps during the year 1934.

PERSONNEL

At the close of the Fiscal Year ending June 30, 1934, there were 1299 officers commissioned in the Air Corps, Regular Army. In addition to the above, there were 58 second lieutenants of the Regular Army of other branches of the service who were detailed to the Air Corps and undergoing flying training at the Air Corps Training Center. The Air Corps was still 351 officers short of its authorized strength of 1650 commissioned officers.

The enlisted strength of the Air Corps at the end of the Fiscal Year was 14,450, including 318 Flying Cadets, this figure comparing favorably with the strength allotted by the Secretary of War at the end of the Five-Year Air Corps Expansion Program of 14,532.

ORGANIZATION

New Units:

New Air Corps units organized during the year were the 39th, 58th and 74th Pursuit Squadrons. In addition, 10 new Air Corps detachments were established, thus providing one for each of the nine Corps Areas, one for Fort Lewis, Wash., and one for the United States Military Academy at West Point, New York. The detachment for the 8th Corps Area was in existence prior to the past fiscal year.

The First Bombardment Brigade Headquarters and the 28th Communications Section at Langley Field, Va., were demobilized on September 30, 1933, the personnel thereof transferred to the Headquarters G.H.Q. Air Force, organized at that field the following day and transferred to Bolling Field, Anacostia, D.C., on February 28, 1934.

The G.H.Q. Air Force:

The Secretary of War, on December 27, 1934, announced his approval of a test organization of the General Headquarters Air Force, effective at once. At the same time it was announced that Lieut. Colonel Frank M. Andrews, Air Corps, had been designated as the Commander of this centralized air force, with headquarters at Langley Field, Va.

The new General Headquarters Air Force will consist of practically all the combat

elements of the Air Corps in continental United States; together with certain Observation and Service units. There will be very few immediate changes of station of Air Corps units incident to the creation of the new organization, the announcement stated; that the various elements of this force will be at several Army flying fields throughout the country, but will be subject to the orders of the Commander of the central organization and in an emergency will be prepared to concentrate at any point without delay. The head of the General Headquarters Air Force will be directly under the Chief of Staff.

The announcement further stated that "the organization now created is a tentative one. After approximately a year of test, it is hoped that the lessons derived will permit of improvement over the present plan. Although several years may be necessary to achieve a final solution, it may be said that the initial step, alone, constitutes by far the most important and evolutionary step towards modernization of the forces of the United States that has been taken since the World War. The principles involved in this step are transcendental in their full implications, and will doubtless influence the development of other arms as well as of the Air Corps. Opportunity has not yet been given the other arms to modernize to the extent considered necessary for the Air Corps. When such opportunity is accorded, whether in peace or war, it will be necessary to provide for the full mobility and power of all arms necessary in a future war of major extent. The effect on all military organization is likely to be marked.

"While the bulk of the Air Corps organizations are included in the new Air Force, certain elements, such as some observation and administrative units, will remain under Corps Area Commanders. The units assigned to the Central Air Force may be reorganized by the Force Commander so far as may be necessary for the conduct of the test. It is hoped that, in general, there will be a minimum of shifting of personnel to effect the reorganization. The change will be largely a shifting of control."

The General Headquarters Air Force will consist of the following units:

Headquarters of the General Headquarters Air Force and the Headquarters Squadron of the G.H.Q. Air Force - Langley Field, Va.

1st Wing, Headquarters Hamilton Field, Calif.
The 7th Bombardment Group, Headquarters and the 9th, 11th and 31st Bombardment Squadrons - Hamilton Field.

The 19th Bombardment Group, Headquarters and 30th, 32d and 93d Bombardment Squadrons - Rockwell Field, Calif.

The 17th Attack Group - Headquarters and 34th, 73d and 95th Attack Squadrons - March

Field, Calif.

The 88th Obs. Squadron, L.R. Amph. at Hamilton Field, the 38th Obs. Squadron, L.R.L.B. at Rockwell Field and the 89th Obs. Squadron, L.R.L.B. at March Field.

Note: The 88th Squadron is to remain at Brooks Field, Texas, for the present, and the 93rd, 38th and 89th Squadrons will be organized at a later date to be fixed by the War Department.

2nd Wing, Headquarters Langley Field, Va.

The 2nd Bombardment Group - Headquarters and 20th, 49th and 96th Bombardment Squadrons - Langley Field, Va. (The 54th detached from G.H.Q. Air Force to Air Corps Tactical School, Maxwell Field, Alabama.)

The 8th Pursuit Group - Headquarters and the 33rd, 35th, 36th Pursuit Squadrons and the 37th Attack Squadron (attached) - Langley Field, Va.

The 9th Bombardment Group - Headquarters and the 1st, 5th and 99th Bombardment Squadrons - Mitchel Field, New York. The 14th Bombardment Squadron to be organized at Bolling Field, D.C.

The 1st Pursuit Group - Headquarters and the 17th, 27th and 94th Pursuit Squadrons - Selfridge Field, Mich. The 36th Pursuit Squadron now at Selfridge Field to be rendered inactive.

The 18th and 31st Observation Squadrons, L.R. Amph. at Mitchel Field, New York, and Bolling Field, D.C., respectively, and the 41st Observation Squadron, L.R.L.B. at Langley Field. The last named organization to be organized from the 41st School Detachment now at Kelly Field, Texas.

3rd Wing, Headquarters Ft. Crockett, Texas.

The Headquarters and the 8th, 13th and 90th Attack Squadrons - Fort Crockett, Texas. The 51st Attack Squadron, now the 51st School Detachment, Air Corps Tactical School, Maxwell Field, to be organized as Attack Squadron and detached from G.H.Q. Air Force to Air Corps Tactical School. The 3rd Attack Group is to be moved to Barksdale Field before June 30, 1935.

The 20th Pursuit Group - Headquarters and the 55th, 77th and 79th Pursuit Squadrons - Barksdale Field, La. The 37th Pursuit Squadron, when organized, to be detached from G.H.Q. Air Force to Air Corps Tactical School, Maxwell Field.

The 42nd Bombardment, 40th Attack and 43d Pursuit Squadrons to be detached from G.H.Q. Air Force to Advanced Flying School, Air Corps Training Center, Kelly Field, Texas.

The 48th Pursuit Squadron to be detached from G.H.Q. Air Force to Air Corps Technical School, Chanute Field, Ill.

The 21st Airship Group will be assigned as a G.H.Q. Air Force unit. Headquarters and the 9th Airship Squadron, Scott Field, Ill.; 19th Airship Squadron, Langley Field, Va., (attached to 2nd Wing).

The stations of various Service squadrons will be as follows:

70th and another Service Squadron to be organized later, at Hamilton Field, Calif.; 76th at Rockwell Field; 64th at March Field; 58th and 59th at Langley Field; 61st at Mitchel Field; 57th and another to be organized later, at Selfridge Field; 60th at Ft.

Crockett (to be moved to Barksdale Field before June 30th, 1935); 71st at Barksdale Field and 24th at Scott Field.

FLYING TRAINING

Flying Cadets:

An important change affecting Flying Cadets was the approval by the War Department of a plan to continue them under that status for an additional year of training with Air Corps tactical units following their graduation from the Advanced Flying School. This plan went into effect with the advanced class which graduated from Kelly Field, Texas, in February, 1934. The practice of awarding students the rating of "Airplane Pilot" upon their graduation from the Advanced Flying School continues in effect, but Flying Cadets are not commissioned in the Air Reserve until after they have completed their additional year of training with tactical units, and provided the proficiency they have attained as military pilots warrants their being so commissioned. At the end of that time they are given another year of active duty under their Reserve commissions with Air Corps tactical squadrons, if funds are available.

Students Matriculating and Graduating From the Air Corps Training Center:

Commissioned officers, enlisted men and candidates from civil life, are selected each four months to attend the Primary Flying School at Randolph Field, near San Antonio, Texas, since there are three entering classes each year. During the calendar year 1934, a total of 60 officers of the Regular Army and 371 Flying Cadets, or a grand total of 431 students, started training at the Air Corps Training Center; 145 Flying Cadets entering the March, 1934, class at Randolph Field, 150 Flying Cadets the July, 1934, class, and 60 officers and 76 Flying Cadets the October, 1934, class. There were graduated from the Air Corps Advanced Flying School at Kelly Field, Texas, during the calendar year 1934, a total of 206 flying students, comprising 56 officers of the Regular Army, 10 graduates of the U.S. Naval Academy who were not commissioned in the Navy because of lack of vacancies and who received Flying Cadet appointments, and 140 Flying Cadets. The March, 1934, class graduated 7 officers and 63 Flying Cadets; the July, 1934, class, 5 officers and 57 Flying Cadets, and the October, 1934, class, 44 officers and 30 Flying Cadets.

Instrument Flying:

The Air Corps completed and placed into practical use the only instrument landing system which proved itself by actual performance. Experiments in instrument or blind landings had been conducted by the Air Corps for a long period of time. The system reached such a degree of practicability that it warranted the training of pilots in its use, and some of them had been so trained. When the Army Air Corps took over the operation of the Air Mail, it was afforded the opportunity of extending the training of its pilots in instrument landings. Steps were initiated looking to the eventual installation on all airplanes of the Transcontinental

V-6714, A.C.

Route between Newark, N.J., and Oakland, Cal., of instrument landing equipment, as well as the establishment of ground installations for instrument landings at the main terminals of that route.

Twelve of the new Martin P-10 bombing planes were equipped for instrument landings, six of them being sent to the Western Zone of the Army Air Corps Air Mail Operations, to operate out of Oakland, Salt Lake City and Cheyenne, and the remaining six to the Eastern Zone for operation over various routes in that area. Officers who had been trained in instrument landings were assigned the duty of piloting these airplanes. The first instrument landing station for Air Mail use was completed at Newark, the eastern terminal of the transcontinental route, on May 3d, the day before the Army inaugurated its fast air mail schedule across the continent. Tests of this installation were conducted on May 8th, under the direction of Captain Albert F. Hegenberger, Air Corps, of the Materiel Division at Wright Field, Dayton, Ohio. The actual instrument flying and landing at Newark on that day was performed by Captain James E. Parker, Air Corps, former test pilot at Wright Field, who received training in instrument landing in 1933. These tests proved highly successful.

The Air Corps system of instrument (fog) landing was successfully applied to high speed tactical airplanes, especially the Martin Bomber (B-10), as previously stated. In service tests at Wright Field, over 800 instrument landings were made, in which 26 pilots from various stations throughout the service received instruction and training in fog landing procedure. Upon completion of these tests, the Air Corps landing equipment was turned over to the Department of Commerce where it received, after extensive tests by that Department, the unqualified indorsement of the Director of Aeronautics, and has been adopted for the commercial airways of the country.

The officers who qualified in instrument landings will later be sent to various Air Corps posts, as soon as instrument landing posts can be completed and furnished at those posts. A total of 43 trucks for instrument landing and guiding stations are now being purchased out of Public Works Funds for the various tactical units in the Air Corps.

THE AIR CORPS TECHNICAL SCHOOL

During the Fiscal Year ending June 30, 1934, 30 Air Corps Regular Army officers, 535 Air Corps enlisted men and 4 National Guard enlisted men graduated from the Air Corps Technical School at Chanute Field, Fantoul, Ill. At this school various courses are taught students in the trades allied to aviation, such as airplane or engine mechanics, aircraft armorers, radio mechanics and operators, aircraft machinists, aircraft welders, parachute riggers and aerial photographers. Student officers usually pursue the courses in aerial photography, aircraft maintenance, aircraft armament or radio communications.

AIRPLANES

Purchase of New Airplanes:

Announcement was made by the Secretary of War on January 4, 1934, that the sum of

\$7,500,000, allotted by the Public Works for the Army Air Corps, will be spent for purchasing various types of combat airplanes, including radio equipment, machine guns, spare parts, spare engines, and other necessary equipment.

In June, 1934, the Assistant Secretary of War, Hon. Harry H. Woodring, approved the award of contracts to the Glenn L. Martin Co., of Baltimore, Md., for 81 Bombing planes at a total cost of \$3,195,450, and to the Wright Aeronautical Corporation, of Paterson, N.J., for 280 airplane engines at a total cost of \$1,705,733.

In the month of December announcements were made of the award of contracts for new airplanes for the Army Air Corps as follows:

A contract in the total amount of \$1,996,700 to the Consolidated Aircraft Corporation, Buffalo, New York, for two-seater Pursuit type airplanes.

A contract for 71 Observation type airplanes to the Douglas Aircraft Company, Inc., of Santa Monica, Calif., in the total amount of \$1,855,394.

A contract for 35 Basic Training airplanes to the Seversky Aircraft Corporation, New York City, in the total amount of \$754,738.

A contract for 110 Attack type airplanes to the Northrop Corporation, Inglewood, Calif., in the total amount of \$1,896,400.

Development of New Airplanes:

Several types of military aircraft having outstanding performance characteristics were produced during the year, these being the P-29 (Boeing) single-seater Pursuit, equipped with a supercharged Pratt & Whitney (R-1340) engine, and the 2-place Pursuit, Consolidated Aircraft Corporation (P-30), equipped with a supercharged Curtiss-Wright (V-1570) engine. The P-29 is a low-wing monoplane of all-metal construction with enclosed cockpit and retractable landing gear. This is the first airplane of the Pursuit type to possess both of these features. This airplane, which is extremely clean in streamlining and design, is equipped for installation of a radio receiver and transmitter. The P-30 is also a low-wing monoplane of all-metal construction, having a monocoque fuselage, side-type supercharger and retractable landing gear.

Two Bombardment type planes, the Glenn L. Martin (B-10) and (B-12), were placed in service, and development work continued through designs, studies and improved types of engines.

Development work on the Attack airplane centered around single engine, low-wing monoplane types. A satisfactory model was developed which meets present requirements for this type, and its procurement was undertaken.

There were no new developments in connection with the Observation type airplane, save that one B-10 Bombardment plane was converted into an air force observation type for service test, and work was continued on an Amphibian type airplane, the Douglas (YOA-5), for delivery in the near future.

Development of Accessories:

In aerodynamics, improved methods were evolved for making controllable propeller computations and performance calculations of airplanes with supercharged engines. A study of lift-increasing devices indicated that a substantial decrease in the landing distance an airplane normally requires could be made by the use of flaps.

A marked advance was made in the design of cantilever landing gear, and new methods were devised for testing the landing gear of large, heavy aircraft for which the existing testing apparatus proved inadequate.

Considerable progress was made in the study of the cause and elimination of propeller vibration and propeller cone troubles. The welded hollow steel propeller blade was perfected and produced in a greater variety of sizes than heretofore. Development of the solid steel propeller blade was also initiated.

Activities were directed towards the development of spot welding as a means of fabricating aircraft structures. For this purpose special equipment was installed at Wright Field, Dayton, Ohio, for welding aluminum alloys and stainless steel by both the spot and seam processes, and specifications were prepared to enable contractors to install this equipment and conduct the experimental manufacture of low stressed parts.

In the matter of lubricating oils, suitable grades having a flat viscosity curve and low pour point were developed for service test to permit the starting of engines at low temperature without excessive consumption.

Synthetic rubber was developed and adopted for several articles of standard equipment, such as refueling hose, fuel connections in gasoline lines, balloon valve seats and segregator gaskets. Tires and tubes made of this material were also submitted for service test.

Streamline casings for landing wheels were made standard for all new equipment, and other types of tires and tubes reduced to substitute standard for use on older equipment.

Development of Engines:

In aircraft engine development, efforts were devoted principally to refinements therein as well as accessories, embodying new features. Thus, new models of older type engines, but with increased power outputs and with supercharging to higher altitudes, were placed in service. In connection with supercharger development, a new alloy was developed for turbine buckets which in laboratory tests proved superior to the previous materials used.

CONSTRUCTION WORK AT FIELDS AND STATIONS

During the year, construction work was in progress at many of the Air Corps fields and stations in the United States, this having been made possible through the allocation for that purpose of Public Works funds and funds appropriated in the Relief Bill. Under Public Works funds, construction work was initiated at Barksdale Field, La.; Hamilton Field, Calif.; Langley Field, Va.; Maxwell Field, Ala.; Marshall Field, Kansas; Middletown Air Depot, Pa.; Mitchel Field, New York; Patterson Field, Ohio; Phillips Field, Md.; Pope Field, N.C.; Post Field, Okla.; Randolph Field, Texas; Selfridge Field, Mich.; and Wright Field, Dayton, Ohio. This construction work embodied such projects

as barracks, quarters, hangars, warehouses, gasoline storage systems, roads and walks, drainage systems, heating plants, and the grading and improvement of landing fields. All of these projects were in various stages of completion prior to the close of the fiscal year, and, in the majority of instances, were more than 50% completed.

AIDS TO FLYING

The development of avigational aids to flying resulted in the procurement of improved calculating machines, a small experimental pendulous sextant, and a new drift meter of design superior to that now in use.

Instrument development has produced improved types of gyro-driven instruments capable of reliable operation in extremely cold temperatures, altimeters, automatic pilots, de-icers, electric fuel gauges, and a reserve-and-main tank fuel switch-over signal device which also prevents vapor lock in fuel lines.

New night flying equipment was procured for one field, and the lighting system of seven other fields was revised. Two large day-and-night wind indicators were set up for service test.

A new method of towing targets, using Manila rope in place of steel cable, was initiated, permitting greater flexibility of operation and resulting in reduced expense.

A new type of tow target was developed by the Materiel Division, which is capable of being towed at speeds up to 200 miles per hour, or double the speed of previous types. This increased speed is due to a change in target design, the new type being almost a straight sleeve, opened at each end, imposing very little drag other than the frictional drag of the fabric. The former design was a semi-dirigible type, cone-shaped, closed at the rear, and the mouth held open by a large ring. The weight of air imprisoned in the cone reduced the speed of the plane considerably. This new target was developed in two sizes, one 3 ft. in diameter and 30 feet long for anti-aircraft practice, and one 2 ft. in diameter and 15 feet long for aerial gunnery practice.

DECORATIONS AND AWARDS

Decorations and awards made during the calendar year 1934 to Air Corps personnel for heroic conduct or distinguished service in connection with flying are enumerated below.

Distinguished Flying Cross:

Captain Albert T. Hegenberger, Air Corps, in recognition of his most valuable contribution to the science of aviation in connection with instrument flying, was, on May 16, 1934, presented the Distinguished Flying Cross Oak Leaf Cluster by the Secretary of War at the Army War College Parade Ground, Washington, D.C. It was at Wright Field, under Captain Hegenberger's supervision, that the instrument landing system previously mentioned had reached its present efficiency and practicability. This officer made the first solo instrument landing on May 9, 1932, flying in an airplane with a hooded cockpit which excluded all vision of outside surroundings.

A formal military ceremony featured the presentation of the decoration to Captain Hegenberger. He previously received the Distinguished Flying Cross for his participation with Captain Lester J. Maitland in the non-stop flight from California to Hawaii in the Spring of 1927.

Captain Russell L. Meredith, United States Army, Retired, was presented the Distinguished Flying Cross on April 24, 1934, at Governors Island, N.Y., for heroism while participating in an aerial flight on February 7, 1923. Upon learning that an injured man was lying at the point of death on Beaver Island in Lake Michigan, Captain Meredith (then 1st Lieut., Air Service) voluntarily made a hazardous flight from Selfridge Field, Mich., for the purpose of taking medical aid to the patient, no other means of transportation being possible owing to the frozen condition of the lake. Extremely dangerous flying conditions were encountered, blinding snow and mist destroying the visibility, thus making it necessary to land along the shore in order to determine the location of the island. In so doing it was discovered that the compass had an error and that the supply of gasoline was limited. Due to the urgency of the mission, however, Lieut. Meredith continued the flight, thus enabling a doctor to reach the patient in time to be of service.

First Lieut. Cornelius W. Cousland, Air Corps, was awarded the Distinguished Flying Cross for heroism and extraordinary achievement displayed while piloting a Douglas Amphibian airplane over Panama Canal Zone on May 31, 1934. When about 400 yards from the edge of Gatun Lake, at an altitude of approximately 1400 feet, mechanical failure caused a portion of the right motor to penetrate the pilot's cockpit with such force that the copilot was fatally injured and fell across Lieut. Cousland and the controls. The plane started into a spin, but Lieut. Cousland disregarding his own serious injuries from flying glass, ordered his passengers to retain their seats and by his courage, presence of mind and complete mastery of the art of piloting, maneuvered the disabled aircraft to a safe landing on the surface of the stum-studded lake.

Major William E. Kepner, Captains Albert W. Stevens and Orvil A. Anderson, Air Corps, were awarded the Distinguished Flying Cross for extraordinary achievement while participating in an aerial flight. Major Kepner was pilot and commander, and Captains Stevens and Anderson, Scientific Observers of the National Geographic Society-Army Air Corps Stratosphere Balloon Flight, which took off from the vicinity of Rapid City, South Dakota, July 28, 1934, and landed near Loomis, Nebraska, that same day. Each officer assisted in piloting the balloon into the stratosphere to an altitude of 80,613 feet, and in making continuous scientific observations en route, and when the balloon became disabled through circumstances beyond human control, did attempt, under most adverse and hazardous conditions, to land successfully the disabled aircraft in order to preserve the scientific records that had been obtained. By the exercise of cool judgment and foresight under these conditions, certain scientific records were saved and the disabled aircraft was abandoned only when it was clearly evident that not to do so would prove disastrous to human life.

The Cheney Award:

The Cheney Award, established by the mother and sister of the late 1st Lieut. William H. Cheney, Air Service, who was killed in an air collision at Foggia, Italy, during the World War, as a perpetual memorial to him, was presented for the year 1933 to 2nd Lieut. William L. Bogen, Air Reserve; Staff Sergeant Doy D. Dodd and Sergeant Thomas J. Rogers, Air Corps. This award, which is bestowed annually by the Chief of the Air Corps for an act of valor or extreme fortitude or self-sacrifice in a humanitarian interest not necessarily of a military nature but which shall have been performed in connection with aircraft, consists of a bronze plaque with the name of the recipient engraved thereon and a substantial cash award derived from the interest accruing annually from a trust fund of \$15,000 set aside by the donors. The acts of valor and self-sacrifice for which the presentation of the Cheney Award was made occurred at Fort Clark, Texas, on May 4, 1933. Lieut. Bogen, pilot of an Army Transport plane, was en route from Fort Crockett to March Field, Calif., with Master Sergeant Joe Grant, Staff Sergeant Doy D. Dodd, Sergeants J.M. Dunlavy and Thomas J. Rogers, and Corporal Leo E. Maupin as passengers. While attempting to make a landing at Fort Clark, in order to refuel the plane, a treacherous gusty wind jeopardized a safe landing. The pilot opened the throttle to try another landing, but the plane was sluggish in regaining its flying speed, the landing gear dragging through the trees and the propeller chopping the highest branches. The airplane continued flying for several seconds, gaining a little altitude, but finally crashed head-on into a grove of tall pecan trees, immediately bursting into flames, crashing 50 feet to the ground and finally exploding.

Sergeant Rogers, without regard for safety of his own life and limb, delayed his exit from the burning wreckage in order to assist Sergeant Dunlavy, who was stunned and in a dazed condition as a result of the crash. After aiding Sergeant Dunlavy, and perhaps because of having aided him, Sergeant Rogers himself became entangled in the wreckage and was extricated only because of the efforts of others present, and then only after receiving severe burns. Lieut. Bogen and Sergeant Dodd, after extricating themselves from the wreckage of the burning airplane, observing the plight of Corporal Maupin who, caught in the wreckage, appeared unable to free himself, reentered the flaming mass of the wrecked airplane without regard to their own personal safety, liberated the imperiled passenger and led him to safety.

The Soldier's Medal:

Lieut. Bogen and Sergeants Dodd and Rogers also were awarded the Soldier's Medal by the War Department in recognition of their heroic conduct, which was characterized as measuring up to the best traditions of the military service.

The Mackay Trophy:

The Mackay Trophy, presented to the War Department in 1912 by Mr. Clarence H. Mackay and since that time, except during the World War, awarded annually to Air Corps officers for each year's most outstanding flight, was for the year 1933 tendered to Captain Westside T. Larson,

Air Corps, in recognition of his pioneering flights in connection with the development of methods and procedure of Aerial Frontier Defense. The flights performed by Captain Larson involved instrument take-offs from and landings on both land and water, proceeding to designated points at sea and returning therefrom under instrument flying conditions. Through his efforts and untiring zeal, as exemplified by his flights, various obstacles incident thereto were surmounted and the way was paved for the training of a number of Air Corps pilots in the technique of this highly important art.

FLIGHTS

The Alaskan Flight:

The most outstanding achievement credited to the Army Air Corps in recent years was the flight of ten Martin Bombers (B-10) from Washington, D.C., to Fairbanks, Alaska, and return, which involved a total distance estimated at approximately 8,290 miles. Led by Lieut. Colonel Henry H. Arnold, Air Corps, Flight Commander, the flight, which comprised 14 officers and 16 enlisted men, took off from Bolling Field, D.C., on the morning of July 19, 1934, and reached Fairbanks, Alaska, at 11:30 a.m., July 24th. The total flying time for this trip was 25 hours and 30 minutes, the B-10 airplanes averaging a speed of approximately 157 miles an hour over the distance of 4,000 miles.

Stops en route to Fairbanks were made at Dayton, Ohio; Minneapolis, Minn.; Winnipeg, Manitoba, Canada; Regina, Saskatchewan; Edmonton, Alberta, Prince George, British Columbia and White Horse, Yukon Territory. During the stay in Alaska, over 20,000 square miles of territory was photographed from the air by the Army airmen.

The return journey was made via Juneau, Alaska, and Seattle, Washington, the start from Fairbanks being made on the afternoon of August 16th. The trip from Juneau to Seattle, involving a distance of 990 miles, was made in a flying time of 5 hours and 40 minutes, or at an average speed of 175 miles an hour. It was the longest leg of the entire journey and was made over the water, following the coast line. Thus for the first time in aviation history, Alaska was linked with continental United States by a mass non-stop flight of American airplanes. The flight reached Washington on August 20th. The return trip from Fairbanks to Washington, a distance of 4,290 miles, was made in a flying time of 26 hours or at an average speed of 165 miles an hour. Thus, for the entire journey, the total flying time was 51 hours and 30 minutes, and the average speed approximately 161 miles an hour.

Only one minor accident marred the otherwise perfect performance of the new Bombing planes. Motor failure necessitated a forced landing in the water at Cook Inlet. The plane was towed ashore, promptly repaired, and placed in perfect flying condition.

Personnel participating in the flight in addition to Lieut. Colonel Arnold, were Majors Ralph Royce, Hugh J. Knerr, Malcolm C. Grow;

Captains Harold M. McClelland, Ray A. Dunn, John D. Corkille, Westside T. Larson; 1st Lieuts John S. Griffith, Ralph A. Snively, Charles H. Howard, Moz McClellan, Lawrence J. Carr; 2nd Lieut. Leonard F. Harman; Master Sergeants Walter E. Berg, Artie L. Revert; Technical Sergeants William B. Moorhead, Gregory A. Mitchell, Adolph Cattarrius; Staff Sergeants Plato R. Miller, Anton F. Gill, Rua C. Hayes, Marlin Eddy, Roy White, Gustav Soanburg, Lynn H. McQuiston, Henry V. Puzenski; Sergeant Edward W. Cushing; Corporals Arthur R. Loftus and Vance E. Hunt.

Two advance officers, Captains Ross G. Hoyt and Edwin B. Bobzien, Air Corps, preceded the flight to Fairbanks. Both piloted C-38 Observation planes, the former being accompanied by Corporal Wilmer B. Hoffman and the latter by Private Lewis Krause. Upon the arrival of the Alaskan Flight at Fairbanks, these four men were picked up as flight members and used as photographers and aviators on photographic missions.

Captain Carlyle H. Ridenour, Air Corps, was the advance Supply Officer, but did not arrive at Fairbanks until July 30th. He was used as aviator during the photographic missions, in addition to assisting the Supply Officer.

Captain George W. Goddard, accompanied by Technical Sergeant Samuel T. Bush and Sergeant Anton Hansen, traveling as did Captain Ridenour, by rail and water, arrived at Fairbanks on July 27th with photographic equipment, and set up a field photographic laboratory. He acted as photographer during photographic missions.

The personnel above named returned to their home stations shortly following the departure of the Alaskan Flight on their homeward-bound journey.

Flights in a Humanitarian Interest:

Army airmen in the Panama Canal Zone early in the year were called upon to perform one of those flying missions in a humanitarian interest which they had often accomplished on many occasions in the past. Personnel from the American Legation, Republic of Panama, were the victims of a serious automobile accident which occurred near Rio Hato, 60 miles southwest of Albrook Field, on the Pacific side of Panama. Notified of the accident, the Commanding General of the Panama Canal Department ordered the Commanding Officer of Albrook Field immediately to dispatch an airplane to the scene of the accident and transport the injured persons to the Gorgas Hospital.

The airplane, a C-29 Transport, departed from Albrook Field at 4:20 p.m., landed at Rio Hato at 5:30 p.m., and again made the trip in 40 minutes. The persons involved in the accident were three men, three women and a baby. It is estimated that it would have required four hours to transport the injured persons by automobile, the road connecting Rio Hato with Panama City being rather rough. The passengers traveled in perfect comfort during the 40-minute flight.

On June 13, 1934, Army airmen in the Panama Canal Zone again performed an errand of mercy. Ocotepeque, a city in Honduras, was visited by a destructive flood, as a result of which many people were left homeless. There were no tents or material for their creation available, and

the Honduran Minister wired the American Minister at Panama, requesting that Army tents be rushed by airplane from the Canal Zone to Tegucigalpa, Honduras, for the use of the survivors of the flood. Eleven bombing planes, manned by 13 officers and 25 enlisted men, promptly transported fifty tents to the stricken community. Needless to say, the Government of Honduras was warmly appreciative of the prompt aid rendered by the Army Air Corps.

A month later, an Army airplane carried more than 800 pounds of clothing from San Jose, Costa Rica, to San Salvador, where a tornado caused much suffering among the inhabitants. The American Minister to Costa Rica stated that the act of generosity on the part of the United States in placing the Army airplane at the disposition of the Costa Rican Red Cross had attracted considerable attention.

Intercepting an Army Transport at Sea:

Intercepting an Army Transport about 130 miles out at sea under conditions of limited visibility was a routine air navigation problem accomplished by Air Corps personnel, stationed at Rockwell Field, Coronado, Calif., during the month of May. The flight was made in an Amphibian plane, with Captain Westside T. Larson as pilot, Lieut. R.W. Goetz as aviator and Lieut. Roger V. Williams as radio operator. A radio message was received by the Commanding Officer of Rockwell Field from the Transport REPUBLIC, bound for San Francisco, giving its estimated position at 4:00 a.m., the following day. The interception problem was handled by dead reckoning. After the necessary computations were made, the airplane took off from Rockwell Field at 7:00 a.m., and in slightly more than an hour and a half was circling over the Army Transport amidst the cheers and hand-waving of the passengers who swarmed the decks of the vessel.

The Air Races at Cleveland, Ohio:

One Squadron of 18 Pursuit planes from Selfridge Field, Mt. Clemens, Mich., and three Pursuit planes from the Air Corps Tactical School at Maxwell Field, Montgomery, Ala., participated in the National Air Races at Cleveland, Ohio, August 31 - September 3, 1934. The Squadron, led by Captain George P. Tourtellot, Air Corps, gave demonstrations daily of maneuvers in mass formation. The three pilots from Maxwell Field, who were termed the "Men on the Flying Trapeze" performed wing-to-wing maneuvers which are difficult and hazardous for a single acrobatic plane. Led by Captain C.L. Chennault, the trio, whose two outboard fliers were Lieuts. H.S. Hansell and J.H. Williamson, did loops, Immelman turns, wingovers, inverted maneuvers and finally two-thirds of a spin as if one hand only were on a single stick.

National Elimination Balloon Race:

Two free balloon teams, representing the Army Air Corps, participated in the National Elimination Balloon Race, which started from Birmingham, Ala., July 31, 1934, viz.: Captain William J. Flood, Air Corps, pilot, with 1st Lieut. R.R. Gillespie as aide, and 1st Lieut. Haynie McCormick, Air Corps, pilot, with 1st Lieut. J.P. Kirkendall, Air Corps, as aide. The balloon piloted by Captain Flood finished in second place, a distance of 189.1 miles being covered.

THE OPERATION OF THE AIR MAIL

The Army Corps took over the operation of the Air Mail on February 10, 1934, pursuant to an Executive Order of the President of February 9th. The actual carrying of the mail began on February 19th, and terminated on June 1st. Three territorial zones were established, the Eastern Zone, with Headquarters at Newark, N.J.; the Central Zone, with Headquarters at Chicago, Ill., and the Western Zone, with Headquarters at Salt Lake City, Utah.

Nine air mail routes were established in the Eastern Zone, four of which were with Newark as the starting point and terminals as follows: Boston, Chicago, Miami and St. Louis. The five others were from Washington to Cleveland; Cleveland to Memphis, Tenn.; Atlanta, Ga. to St. Louis, Mo.; Detroit, Mich., to Toledo, Ohio, and Chicago to Jacksonville, Fla.

The four routes of the Central Zone were from Chicago to Dallas, Texas; Chicago to Cheyenne, Wyoming; Memphis, Tenn., to Fort Worth, Texas, and St. Louis to Kansas City, Mo.

The four routes of the Western Zone were from Salt Lake City to San Diego, Calif., Salt Lake City to Seattle, Wash.; Cheyenne to Pueblo, Colo.; and Cheyenne to San Francisco, Calif., via Salt Lake City.

The mileage of the above-named routes totalled 13,204. Taking into consideration the number of trips flown daily, there were a total of 40,830 miles scheduled to be flown each day.

Air Mail operations were suspended on March 10th and resumed on March 19th, with the number of routes reduced, viz.: three for the Eastern Zone, two for the Central and four for the Western Zone. One route was added to the Central Zone on April 8th (Chicago to St. Paul, Minn.) and this route later extended to Fargo, North Dakota. The above routes totalled 7,249 miles. Taking into consideration the number of trips flown daily, there were a total of 25,622 miles scheduled to be flown each day.

Air Mail operations by the Air Corps on these ten routes were terminated as follows: four on May 7th, one each on May 8th, 9th, 12th, 16th and 17th, and the last one on June 1st.

The total amount of mail flown was 777,389 pounds; the mileage on scheduled trips flown totalled 1,590,155, and the hours of scheduled trips flown totalled 12,897.44. In addition to the hours flown actually carrying the mail, 29,458 hours were flown on such missions as mail administration, mail engineering and mail training.

There was a unanimity of opinion in all circles that the winter of 1934 was the most severe this country had experienced in many years. Despite the difficulties which beset the Air Corps during the air mail operations, principally due, as before stated, to a most unusual and prolonged stretch of bad weather, not a single pound of mail was lost. In this connection, it might be interesting to note that the mail lost or destroyed by commercial firms carrying air mail amounted to 4,605 pounds in 1930; 2,807 pounds in 1931; 1,340 pounds in 1932, and 2,807 pounds in 1933, or an average per month of 388 pounds in 1930, 234 pounds in 1931, 111 pounds in 1932 and 172 pounds in 1933.

On the last air mail trip from the Pacific

to the Atlantic Coast, that is, from Oakland Calif. to Newark, N.J., on May 8, 1934, a remarkable record of 14 hours and 8 minutes elapsed time was established. Six Army pilots relayed the load of mail across the American continent, flying Martin Bombers (B-10) and Curtiss (A-12) Attack planes, at an average speed for the entire trip of 2,718 miles, of 191 miles per hour, including stops. Martin Bombers were used in the Western Zone from San Francisco to Cheyenne, and in the Eastern Zone from Chicago, Ill., to Newark, N.J. The A-12 Attack planes were utilized in the Central Zone from Cheyenne to Chicago. First Lieutenant Robert L. Schoenlein, Air Corps, in a Martin Bomber (B-10) started the record run from San Francisco at 3:20 a.m., Eastern Standard Time, and covered the distance of 671 miles to Salt Lake City, Utah, at an average speed of 200 miles per hour. First Lieut. Carl B. McDaniel, Air Corps, also flying a B-10, made the next leg of the flight to Cheyenne, a distance of 415 miles, at the same rate of speed as Lieut. Schoenlein, arriving at 8:30 a.m.

Picking up the mail at Cheyenne, an A-12 Attack plane, piloted by 2nd Lieut. Craven C. Rogers, Air Reserve, covered the distance of 482 miles to Omaha, Nebraska, at an average speed of 165 miles per hour. At 11:23 a.m., Captain John D. Corkille, Air Corps, piloting an A-12 Attack plane, resumed the journey and covered the distance of 426 miles to Chicago at an average speed of 157 miles per hour. Both Captain Corkille and Lieut. Rogers were handicapped by headwinds in their flight across the Central Zone.

Departing from Chicago at 2:15 p.m., Lieut. Murl Estes, Air Reserve, piloting a Martin Bomber (B-10), covered the 318 miles to Cleveland at an average speed of 208 miles per hour. The last leg of the transcontinental trip from Cleveland to Newark was covered by 1st Lieut. Elwood R. Quesada, Air Corps, also piloting a B-10, in the remarkably fast time of one hour and 40 minutes, or at an average speed for the distance of 406 miles, of 243 miles per hour. Lieut. Quesada arrived at Newark at 5:23 p.m., Eastern Standard Time.

The previous record for a transcontinental air mail trip, made by a commercial company, from Los Angeles to Newark, via Albuquerque, New Mexico; Kansas City, Mo., and Columbus, Ohio, a distance of 2465 miles, was 13 hours and 5 minutes, or at an average speed of 136 miles per hour. In this case the same airplane was used during the entire trip, and hence the mail cargo was not transferred from plane to plane, only changes of pilots being made en route. The transcontinental air mail trip flown by the Air Corps was 247 miles longer than that covered by the commercial airplane and involved five intermediate stops where mail was transferred despite which fact an average speed of 191 miles per hour was maintained for the entire distance.

On a speed test mail flight on May 14th, from Jacksonville, Fla., to Newark, N.J., a distance of 865 miles, 1st Lieut. Charles W. O'Connor, Air Corps, accomplished the jour-

ney in a flying time of 4½ hours, or at an average speed of 192 miles per hour. Stops en route were made at Charleston, S.C., and Pope Field, Fort Bragg, N.C.

SCIENTIFIC FLIGHTS

In addition to the National Geographic Society-Army Air Corps Stratosphere Flight, previously mentioned in connection with the award of the Distinguished Flying Cross to Major Kepner and Captains Stevens and Anderson, the Air Corps at various periods of the year undertook special flights for scientists of the Massachusetts Institute of Technology and the California Institute of Technology, for the purpose of aiding them in the study of meteorology, cosmic rays, and the development of new systems to be employed in the future study of meteorology.

RADIO COMMUNICATIONS

The increased employment of radio communication in conjunction with Air Corps operations was occasioned by new and improved equipment, consisting of new frequency meters, radio equipment test sets, radio receiver oscillators, airplane microphones, and the standardization of long range universal frequency transmitters. Improved aircraft radio reception was accomplished through the localizing and neutralizing of radio interference and the use of a two-wire ungrounded system.

MANEUVERS

Due to budgetary limitations, no combined Air Corps maneuvers were held in the Calendar Year 1934.

For a period of two weeks, from August 26th to September 8th, inclusive, a General Headquarters Command Post Exercise, purely theoretical in nature, was held by the War Department for the purpose of affording field training to higher commanders and staffs and to check existing plans and determine the practicability of the Four Army Organization.

The participation of the Army Air Corps in this Exercise from September 2nd to 8th was intended to bring the General Headquarters Air Force into action for the first time and to serve to develop its mobility and striking power.

The Headquarters G.H.Q. Air Force was located at Eggen Arsenal, N.J., and consisted of 12 officers from the Office of the Chief of the Air Corps, Washington, D.C., with Brigadier General Oscar Westover, Assistant Chief of the Air Corps, as commander. Staffs of higher Air Corps units which met at this locality to discuss and plan the functioning of the G.H.Q. Air Force in war were as follows:

Headquarters of the Third Attack Group, Ft. Crockett, Galveston, Texas, represented by 6 officers, assisted by 6 enlisted men.

Headquarters of the First Pursuit Wing, Selfridge Field, Mich., represented by 6 officers, assisted by 6 enlisted men.

Headquarters of the Second Bombardment Wing, Langley Field, Va., represented by 6 officers, assisted by 6 enlisted men.

Headquarters of the Ninth Observation Group, Mitchel Field, N.Y., represented by 6 officers, assisted by 5 enlisted men.

Headquarters of the Twelfth Observation Group, Brooks Field, Texas, represented by 5 officers, assisted by 5 enlisted men.

Headquarters Squadron, G.H.Q. Air Force, with one officer and 12 enlisted men from Bolling Field, D.C.

This Command Post Exercise was intended to develop clearly the teamwork that is so essential for carrying on successful operations against an enemy whose operations may combine every modern agency or weapon of warfare. The experience gained by commanders and staff officers in the formulation and execution of plans for the employment of the General Headquarters Air Force throughout the various phases of warfare was believed to be of incalculable benefit, particularly at this time when the Army is organizing this highly mobile and powerful fighting unit and must know more about its powers and limitations.

The only flying incident to the Command Post Exercise was that performed by the personnel of the Alaskan Flight. With a few minor changes in personnel, the flight of 10 Martin Bombers (B-10) under the leadership of Lieut. Colonel H.H. Arnold, flew across the continent from March Field, Riverside, Calif., to Mitchel Field, N.Y., to demonstrate the rapidity with which the movement of Air Corps combat units from coast to coast could be accomplished. In this trip across the continent, excellent progress was made as far as Kansas City, Mo., but unfavorable weather conditions eastward necessitated a change in the course to a southerly direction via Shreveport, La.; Montgomery, Ala., and Atlanta, Ga. Bad weather also delayed the flight at Atlanta.

When the flight landed at Langley Field, Va., it remained there for about an hour to simulate the loading of bombs, and then proceeded to Mitchel Field, from which point flights were made to several localities on the East Coast, including Baritan Arsenal to simulate bombing operations.

Minor maneuvers in which the Air Corps participated during the calendar year 1934 were as follows:

Combined Maneuvers at Fort Humphreys, Va., May 15, 1934.

General Field Exercises at Fort Sill, Okla., June 5-9, 1934.

Cavalry Maneuvers at Fort Riley, Kansas, April 10-20, 1934.

Army pilots from Langley Field, Va., flying in 11 Bombardment, 20 Pursuit and 3 Transport planes were in attendance at the All-American Air Races, held at Miami, Fla., January 11-13, 1934, this trip enabling them to receive valuable aviation training.

---oOo---

ADVANCED AVIGATION TRAINING AT ROCKWELL FIELD

Orders were recently issued by the War Department directing 20 Air Corps officers to proceed from their proper stations to Rockwell Field, Coronado, Calif., for the purpose of receiving instruction in advanced aerial navigation, commencing January 11, 1935, and

extending over a period of six weeks.

These 20 officers include Major Charles B. Oldfield, 1st Lieut. Milton J. Smith and 2nd Lieut. Samuel O. Redetzke from Brooks Field, Texas; Captain Edward D. Jones, Randolph Field, Texas; 1st Lieut. John S. Griffith, Kelly Field, Texas; 1st Lieut. Robert F. Tate and 2nd Lieut. William C. Mills, Fort Crockett, Texas; Captain Hoz McClellan, Bolling Field, D.C.; Captain Carl V. Haynes, Langley Field, Va.; 2nd Lieut. Hugh A. McCaffery, Aberdeen Proving Ground, Md.; Captain Frank D. Hackett, 1st Lieut. Benjamin F. Kelsey and 2nd Lieut. Merrill D. Burnside, Wright Field, Ohio; Captain Harold E. Carr, Scott Field, Ill.; 1st Lieut. James E. Parker, Selfridge Field, Mich.; Major Junius W. Jones and Captain Samuel M. Connell, Chanute Field, Ill.; Captain Charles M. Cummings, National Guard Bureau, Washington, D.C.; 1st Lieut. George R. Acheson, Mitchel Field, N.Y.; and Captain Edwin B. Bobzien, Logan Field, Baltimore, Md.

---oOo---

NEW METHOD OF DISSEMINATING WEATHER INFORMATION

According to a recent issue of the Air Commerce Bulletin, published by the Bureau of Air Commerce, radio transmission of the facsimile of a typed or handwritten message may be a future method of disseminating weather information on the Federal Airways System, if experiments now under way by the Department of Commerce prove successful. A system of radio facsimile transmission has been given a preliminary test by the Bureau of Air Commerce with favorable results.

The Bureau also has under consideration other methods of transmitting radio messages in such a way that they can be received in recorded form, but will not make any change in the present communications system of teletype machines operated over land wires until all of these investigations have been completed.

Facsimile transmission, as tested by the Bureau, is based on the scanning-beam principle. In the tests conducted here messages were transmitted from the Washington, D.C., airways radio station at Silver Hill, Md., to the Department of Commerce Building in Washington, D.C.

Both the transmitting and receiving machines are compact, and can be set up for operation by plugging them in, respectively, in a transmitting set in place of the microphone and in the receiving set as a substitute for the headphones or loud speaker.

The message to be sent is typed or written on a strip of paper tape. The typewriter characters should be bold, or if handwriting is sent, a pencil with a broad lead is preferable. The tape with the message is led into the transmitting set where the scanning beam passes rapidly over the letters, and causes radio impulses to be broadcast. At the receiving end the impulses are translated into extremely narrow black lines which make up the separate letters of the words. The scanning beam passes over each letter numerous times; thus, the character appearing on the tape in the receiving machine is made up of a similar number of tiny black lines.

The system sent 76 words a minute during the tests. Its peculiar advantage over other systems of radio transmission in which written or typed messages are reproduced automatically is that the message can be sent through static or heavy background noise, and still be legible at the receiving end. Static will not produce errors.

LIEUT. THEISEN DIES IN CRASH

While enroute to his home station, Bolling Field, D.C., 1st Lieut. Carl F. Theisen, Air Corps, piloting a P-26A airplane, crashed in the vicinity of Lawrenceville, Va., at about 6:30 p.m., January 13th, and was instantly killed. At this writing the cause of the accident has not been determined, and it is not known whether the pilot attempted to use his parachute.

Lieut. Theisen was born at Meriden, Conn., on September 18, 1903. He attended grammar school for eight years; high school, four years, and the Massachusetts Institute of Technology, Cambridge, Mass., for four years, graduating as Chemical Engineer and following this profession in civil life. While attending the M.I.T., he was a member of the R.O.T.C. Unit of this institution, and upon his graduation he received a commission as 2nd Lieutenant in the Air Reserve, June 8, 1926. He was placed on active duty to undergo flying training at the Primary Flying School at Brooks Field, Texas, and he completed the eight months' course February 26, 1927, receiving the rating of Junior Airplane Pilot. He then reverted to inactive status.

In June, 1927, Lieut. Theisen took the examination for appointment in the Regular Army, and was found qualified. His application to take the full flying course at the Air Corps Training Center being approved, he began refresher flying training at Brooks Field, completed the primary course in June, 1928, and the advanced course at Kelly Field the following August, specializing in Pursuit flying. He was thereupon rated "Airplane Pilot," effective October 30, 1928, and placed on extended active duty with the First Pursuit Group at Selfridge Field, Mich.

On February 19, 1929, Lieut. Theisen was commissioned 2nd Lieutenant, Air Corps, Regular Army. He remained at Selfridge Field until September, 1931, when he was assigned as a student at the Massachusetts Institute of Technology to take advanced work in Physics, Chemistry and Metallurgy. Upon the completion of this course of study, he was assigned to duty at Bolling Field, his last station.

The untimely death of this promising young officer is keenly regretted and is a distinct loss to the Air Corps, and its heartfelt sympathy is extended to his bereaved family.

---oOo---

BILLS INTRODUCED IN CONGRESS

The following Bills were recently introduced in the House of Representatives:

H.R. 2830 by Mr. John W. McCormack, of Massachusetts, "That an Air Corps bombardment group be established in the vicinity of Boston, Massachusetts: Provided, That sections 2 and 8 of the Act approved July 2, 1926 (44 Stat. 780), are hereby amended to authorize in the Air Corps one thousand seven hundred and forty-five officers in grades from colonel to second lieutenant, inclusive; sixteen thousand nine hundred and twenty enlisted men; and one thousand eight hundred and sixty-one serviceable airplanes: Provided

further, That the increases over previously authorized personnel and equipment necessitated by this Act shall be made July 1, 1935.

H.R. 2895 by Mr. Theodore A. Foyser, of New York, "That there is hereby authorized to be appropriated out of any money in the Treasury not otherwise appropriated, a sum not exceeding \$2,500,000 for the purpose of increasing the flying-field area of Governors Island, New York, by about seventy acres, more or less; and the Secretary of War is hereby authorized to expend such money, when appropriated, in such manner as may be necessary to accomplish this purpose: Provided, That no money hereby authorized to be appropriated shall be expended until and unless the State of New York shall grant to the United States the title to the land under the water proposed to be filled in and raised above the surface of the water, and shall cede to the United States concurrent criminal and civil jurisdiction over and upon such area of land."

H.R. 3437 by Mr. John J. McSwain, of South Carolina, "That there is hereby authorized to be appropriated not to exceed \$200,000, to be expended for the creation of a public airport for purposes of national defense and as a national shrine to pioneer aviators, at College Park, Maryland, now privately owned and operated and known as 'College Park Airport', College Park, Maryland, being the location of numerous and historical pioneer discoveries and developments in the art and science of aviation, for such use and purpose and for other purposes, as follows:

The sum of \$100,000 be appropriated for the creation, purchase and development of College Park Airport, College Park, Maryland.

The sum of \$50,000 be appropriated to construct an administration building for the airport, which shall contain a memorial hall having paneled upon its walls the names (with brief biographical notices) of such pioneer flyers as can be authenticated as having flown or experimented at College Park Airport.

The sum of \$50,000 be appropriated for the construction of an airplane hangar at College Park Airport suitable for the storing and servicing of airplanes, all of such appropriations, or so much thereof as shall be necessary, not to exceed \$200,000.

Sec. 2. That this airport shall be developed for amateur and sport-flying uses, for private experimental flying where reasonably possible under such rules and regulations as may be promulgated, and for military uses where military crises or emergencies call for the use of same. That this pioneer memorial airport be under the supervision of the Secretary of War, it being understood that it shall be open to visitors and reasonably permitted to users at all times when not in actual military service. The Secretary of War shall have authority to have appraised and to condemn, if necessary, the land comprising the site of the original airport, to complete full Government ownership."

W-6714, A.C.

SOME OF THE MORE INTERESTING BOOKS AND DOCUMENTS RECENTLY ADDED
TO THE AIR CORPS LIBRARY

January 15, 1935

Available for loan to Air Corps Organizations only upon request to
the Air Corps Library, Munitions Bldg., Washington, D.C.

- A 10 Ide, John Jay.
- Germany Chronology of German Aircraft Control. Washington, D.C.
28 National Advisory Committee for Aeronautics, Nov. 10, 1934.
Caption title, 4f. 27cm. Gives brief history of the organization
of the German Aviation.
- C. 13 U.S. Information Service.
Libraries in the United States Government, Washington, D.C.
Wash. U.S. Information Service, Dec. 1, 1934.
Caption title, 12f. 27 cm.
- C 53/157 U.S. Air Corps Tactical School, Maxwell Field, Ala.
1933-34 Staff Duties. Maxwell Field, Ala. Air Corps Tactical School, 1934.
Vol. 5 Cover title, 98p. incl. Charts. 32cm.
- 610 Livre jubilaire publie en l'honneur du Doctor Paul Derache
L76 Lieutenant General Medicin inspecteur general du Service de
Sante. Bruxelles, J. Vromans, April 1933.
148p. Front. 25 $\frac{1}{2}$ cm.
English Title: Jubilee book in honor of Doctor Paul Derache,
Lieutenant General, Medical inspector general of the Medical
Service.
Consists of articles by different Medical officers on Military
surgical subjects.
- 623.74 Fradkin, Mrs. Elvira Thekla (Kush).
F 85 The air menace and the answer. N.Y., The Macmillan company,
1934.
XVIII, 33lp. fold. map, diagr. 22 $\frac{1}{2}$ cm.
This book is not a tirade against the chemical industry or avia-
tion as being especially guilty, nor does this book aim to human-
ize war. It does aim to prove to the non-combatant his or her
immediate interest in disarmament through world organization.
- 629.133 Luftverkehr uber dem ozean... Berlin, E.S. Mittler, 1934.
L96 142p. Ills. (maps, charts) plates, diagrs. 23cm.
English title: Air Traffic over the ocean.
- 940.449 Voisin, Andre Paul.
V87 La doctrine de l'aviation francaise de combat au cours de guerre
(1915-1918). Paris, Berger-Levrault, 1932.
172p. illus., plates, fold. map. 23cm.
English Title: The doctrine of French combat aviation during the
War. (1915-1918)

INSPECTION DIVISION NOTES

The Inspection Division, Office of the Chief of the Air Corps, will take advantage of the opportunity afforded by the resumption of the Air Corps News Letter by furnishing certain information which, it is believed, will be of interest to the Service, particularly to Engineering Officers and pilots.

A few words relative to the organization and officers assigned for duty in this Division are given below:

The Chief of the Inspection Division, Captain Max F. Schneider, Air Corps, functioning directly under the Chief of the Air Corps, directs the inspections and other activities. From time to time, the Chief of the Division makes extended trips for direct conferences with Commanding Officers and Engineering Officers of the various service activities for the purpose of talking over various difficulties encountered in supply and general aircraft maintenance. An effort is made to speed up necessary action to eliminate any difficulties encountered.

The direct inspection of the engineering activities at the various fields is conducted by four commissioned officers, known as Technical Supervisors, each aided by a noncommissioned officer as assistant. To facilitate such inspections, the country has been divided into four inspection areas, with one Technical Supervisor and one assistant conducting the inspections of all Air Corps and National Guard Air Units in his area.

Captain Hugh A. Bivins, with headquarters at Fairfield Air Depot, Patterson Field, Ohio, assisted by Staff Sergeant Frank D. Blair, conducts the inspections for the central area.

Captain B.J. Toohar, assisted by Staff Sergeant Oliver E. King, with headquarters at the Middletown Air Depot, Pa., inspects the stations of the eastern area.

Captain Ames S. Albro, assisted by Staff Sergeant Elliott Scott, with headquarters at the San Antonio Air Depot, inspects the stations of the southwestern area.

Captain Charles W. Sullivan, assisted by Staff Sergeant Ross P. Peck, with headquarters at the Rockwell Air Depot, Calif., inspects the stations of the western area.

Reports of all inspection trips are promptly made and forwarded in order that a close contact may be maintained between the Chief of the Air Corps and the various stations.

During the past year it has been noted that several forced landings have probably been the result of a failure in the fuel system due to the ports of the fuel cock not being in complete register. Careful investigation has shown that sometimes the play between the fuel cock control handle and the valve itself gives the appearance to the pilot that the fuel is fully turned on when, in reality, the openings may not be in full register. Although probably understood by all pilots, it is believed in order to call attention again to the fact that when the control handle, one should feel a "settling into place" and then try the handle to see that a very small amount of play is observed on either side. The following little verse may aid in remembering this important point:

An airplane looks mighty fine
When you approach it on the line,
But if gas valves were set by eye
'Twere better you don't try to fly
Until you check by feel!

Difficulties in this respect have been noted, particularly on various models of the Keystone Bomber, as due to the presence of a universal joint in

the control shaft, a greater amount of play is usually noticed. Some interesting and useful research along this line was accomplished some months ago by Captain Paul Richter, then Engineering Officer at Langley Field.

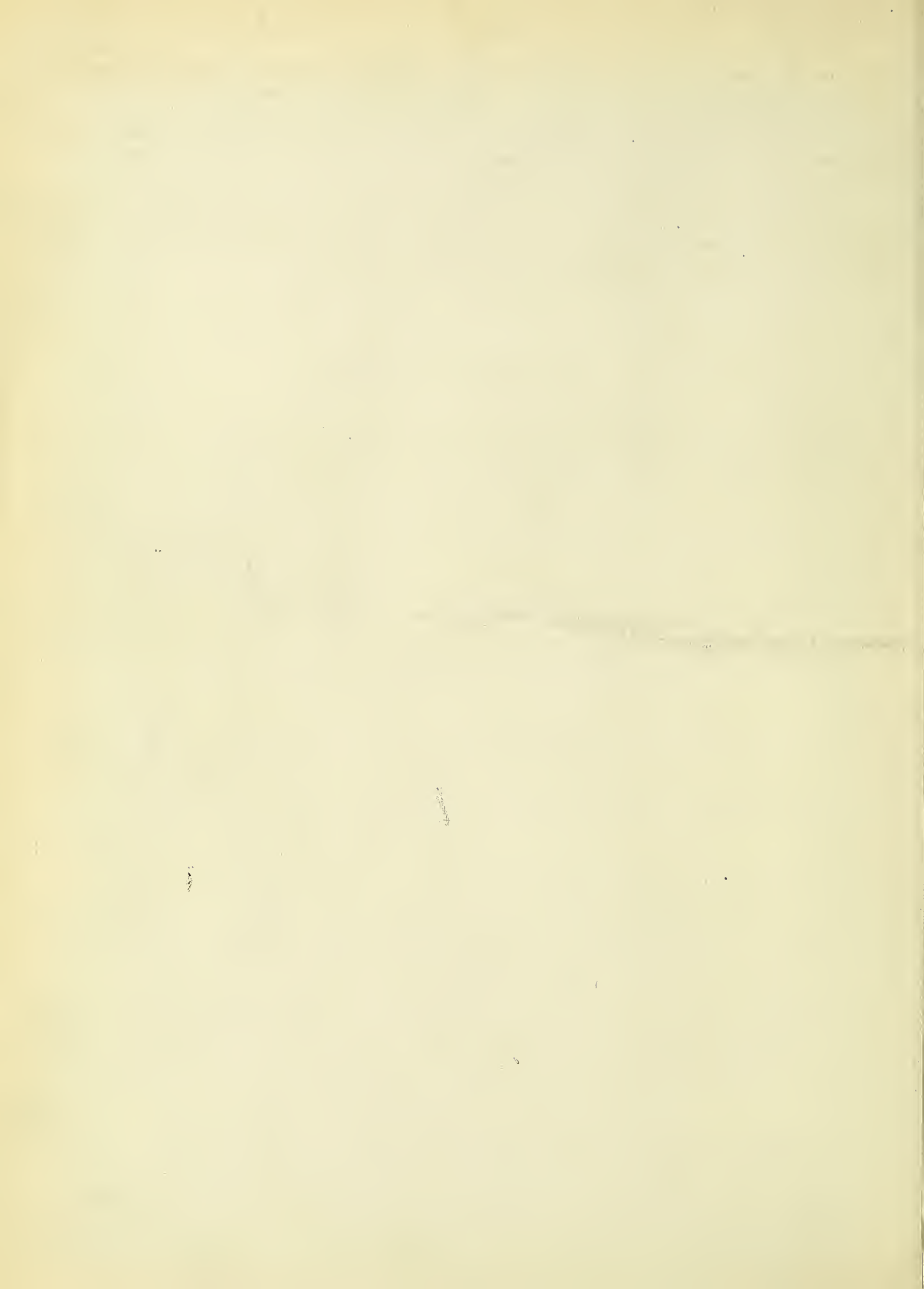
A recent Unsatisfactory Report from one of the service activities has called attention to the presence of an excessive number of blow holes in wheel castings on one of the smaller airplanes.

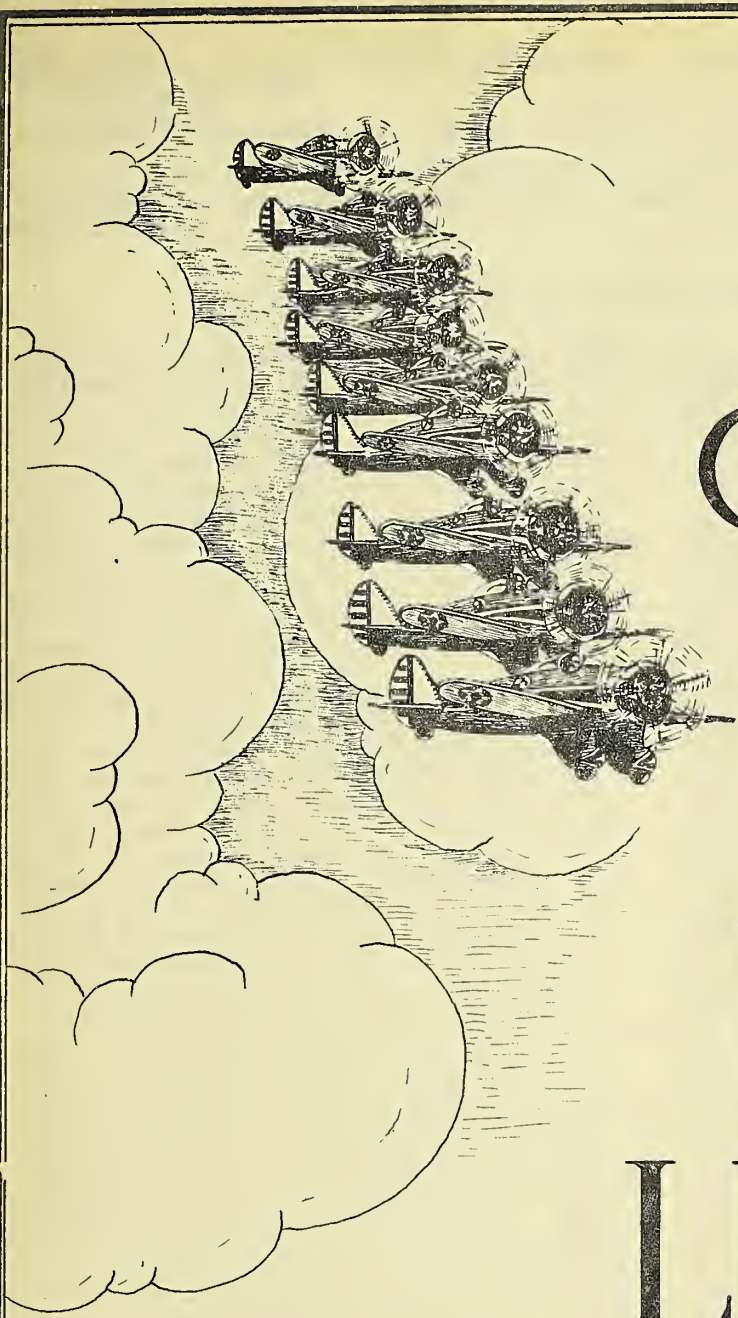
From one of the fields comes word that trouble has been encountered in O-38E airplanes when the excess gasoline drain becomes plugged by dirt falling from the top of the air scoop. At such times as excess gasoline fails to drain out properly, an additional fire hazard is present.

---oOo---

OUR NEXT ISSUE

Desirous of avoiding delay in its publication, this issue of the News Letter is, of necessity, devoid of any items covering activities at Air Corps fields and stations. It is hoped that the contribution of articles and news items from Air Corps activities will be received from now on and that the next issue of the News Letter will be fairly representative of these activities as a whole. It is also hoped to publish in the next issue developments with reference to the General Headquarters Air Force, possibly including the assignment of officers to the staff of the G.H.Q. Air Force Commander and the designation of the Wing Commanders. The items of especial interest to Air Corps officers in the report of the President's Federal Aviation Commission are expected to be available for release.





AIR CORPS NEWS LETTER

ISSUED BY
OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON, D.C.



THE CORPS NEWS LETTER

Published by the
United States Marine Corps
at the Marine Corps
Headquarters, Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

MODERN PURSUIT VERSUS MODERN BOMBARDMENT

A series of tactical operations have been carried out during the past few months by the First Wing, stationed at March Field, Riverside, Calif., under the direction of Lieut.-Col. H.H. Arnold, Commanding Officer, utilizing Pursuit and Bombardment tactical units equipped with the latest types of aircraft now in service. The units employed in these tests were the 34th, 73rd and 95th Pursuit Squadrons of the 17th Group, with Boeing P-26A airplanes, and the 9th, 11th and 31st Bombardment Squadrons of the 7th Group with B-12 Martin Bombers.

In general, the operations were conducted with the planes either carrying actual standard armament loads or equivalent. In all problems it was either assumed that there was a well trained ground observation unit which would report the approach of "hostile" aircraft or scouting planes were actually employed for this purpose. Observation points on the ground were selected to conform as nearly as possible to those that would be selected under actual war conditions and "hostile" airplanes were required to radio their positions when passing over these points in certain types of interception problems; several minutes were permitted to elapse before the messages were delivered to the intercepting units, as there would necessarily be a small delay in war time due to the operation of the network and the time necessary for the issuance of field orders, although all units are "on the alert". Once in the air, however, all position reports were given direct by radio to the unit commanders and, likewise, succeeding orders were given direct to the pilots by radio by the various unit commanders.

The following phases of serial operations were covered:

a. Interception of Bombardment by Pursuit, when Pursuit is located at or in the immediate vicinity of the objective:

- (1) When Bombardment approaches in a direct line at an altitude of 18,000 feet.
- (2) When Bombardment approaches in a direct line at an unknown altitude (high, intermediate and low).
- (3) When Bombardment approaches on an unknown course at an unknown altitude.

b. Interception of Bombardment by Pursuit, when Pursuit is located to one flank of the objective and of the attacking Bombardment.

- (1) When Bombardment approaches in a direct line at a known altitude.
- (2) When Bombardment approaches on an unknown course and unknown altitude.

A total of 26 interception problems were

carried out. Tactics and types of formations used were those best suited for Pursuit in the attack of Bombardment, and the planes used the following types of armament:

- (1) Single-seater Pursuit, armed with synchronized .30 caliber machine guns.
- (2) Single-seater Pursuit, armed with fixed synchronized .50 caliber machine guns or small cannon.
- (3) Pursuit armed with bomb-dropping gear with a capacity of from 15 to 40 bombs of from 5 to 10 lbs. weight.

In preparing the interception problems, an attempt was made to secure operations over all kinds of terrain. Thus, in some of the problems, the Bombardment started their mission over the ocean, in others, far out over the desert, and still others over the mountains. Accordingly, the Pursuit was given an opportunity to work over very varied terrain at varied altitudes. In as many problems as possible, the Bombardment started from dispersed areas and assembled over a known point before continuing to their objective. In all cases, the Pursuit was given such information as they would normally receive from ground look-out stations and the position of these observation stations was varied to assume front lines at varying distances from the objective of the bombardment attack.

The time required to issue orders and clear the airdrome, the time to reach various altitudes, the many echelonments and altitudes used for attacking elements, their relative positions with respect to the bombardment, and the order of attack by the elements forms an extremely interesting and instructive study. All this data will be compiled by the Information Division, Office of the Chief of the Air Corps, and sent to the Air Corps Tactical School, the overseas departments and, at the request of the Commanding Officer of the General Headquarters Air Force, to Wing and separate Group Commanders of the Air Force. This information will be for official use only. Still further data relating to armament, equipment and technical functioning, will be furnished to the Chief of the Materiel Division.

These upper air laboratory tests are to be continued at March Field, it is understood. Undoubtedly, as the later types of airplanes are furnished to other Pursuit and Bombardment units, they will desire to carry out similar tests. It is to be hoped there can be made available complete equipment of camera guns for both Pursuit and Bombardment, so that still more realistic data may be secured.

V-6718, A.C.

THE NEXT STUDENT CLASS AT FORT LEAVENWORTH

In an announcement recently issued by the War Department regarding the composition of the next class of student officers to pursue the course at the Command and General Staff School at Fort Leavenworth, Kansas, the names of 17 Air Corps officers are noted, as follows:

Major Carl Spatz	Washington, D.C.
Major Gerald E. Brower	Manila, P.I.
Capt. Chas. C. Chauncey	Ft. Crockett, Texas
Capt. John D. Corkille	Ft. Crockett, Texas
Capt. Wm. S. Gravely	San Antonio, Texas
Capt. Fred'k Von R. Kimble	Maxwell Field, Ala.
Capt. Caleb V. Haynes	Langley Field, Va.
Capt. Chas. M. Cummings	Washington, D.C.
Capt. Warren R. Carter	Maxwell Field, Ala.
Capt. Victor H. Strahm	Wright Field, Ohio.
Capt. Leland R. Hewitt	Maxwell Field, Ala.
Capt. Clarence P. Talbot	Maxwell Field, Ala.
Capt. Edgar E. Glenn	Maxwell Field, Ala.
Capt. Morton H. McKinnon	Rockwell Field, Cal.
1st Lt. Hoyt S. Vandenberg	Maxwell Field, Ala.
1st Lt. Ralph F. Stearley	Maxwell Field, Ala.
1st Lt. Walter L. Wheeler	Maxwell Field, Ala.

The School starts the first week in September and extends for a period of ten months.

---oOo---

APPOINTMENT OF NEW OFFICERS FOR THE AIR CORPS

A preliminary examination will be held on February 2nd, and a final examination on April 2, 1935, of applicants for appointment as second lieutenants in the Air Corps, Regular Army, in accordance with the provisions of AR 605-5 and special conditions as set forth in Circular No. 2, War Department, January 16, 1935, viz:

1. Applications from eligibles desiring to compete in the announced examinations should be submitted to the corps area and department commanders in accordance with Section III, AR 605-5.

2. Eligibility to compete in the examination will be confined to candidates, who are qualified flyers, falling within the scope of the following classifications:

- a. Who fulfill the necessary mental, moral, and physical qualifications for appointment as second lieutenant in the Regular Army.

- b. Who have served a minimum of twelve months on active or extended active duty as pilots with a tactical unit of the Air Corps.

- c. Who have efficiency ratings of satisfactory or above for every period of active duty, or extended active duty.

- d. Who are physically qualified for flying.

- e. Who have not yet reached 29 years and 9 months at the time of final examination.

All applicants who have not served as pilots on active or extended active duty within two years from date of making application for examination will be required to demonstrate their proficiency as pilots before the board conducting their examination.

3. Each application should be accompanied by the necessary documentary evidence substantiating the candidate's claims for exemption in educational examination, as well as creden-

tials establishing his practical flying qualifications. Upon receipt and consideration of such documents, accepted candidates will be authorized by the corps area authorities to appear before specified boards and will be granted such exemptions in the mental examination as circumstances warrant. Candidates whose applications may not be approved will be so informed.

4. Graduates of the Air Corps Primary and Advanced Flying Schools who are also graduates of recognized colleges and universities will be exempted from the entire mental examination prescribed by AR 605-5.

---oOo---

POST FIELD CONSIDERABLY IMPROVED

Post Field, Fort Sill, Okla., the home of Flight 'E,' 16th Observation Squadron and the 1st Balloon Squadron, Air Corps, boasts of several new and modern building projects completed during the past year.

A new Squadron Barracks, Fire Station, Infirmary, nine commissioned officers' quarters and twelve noncommissioned officers' quarters were completed and are now occupied.

Last year the old balloon hangar at Ross Field, Calif., was dismantled and moved to Post Field, and the renovating and reconstruction was completed in December. The aluminum painted surface of this building reflects the light to such an extent that it makes a landmark visible from a distance of fifty miles on an average day.

Air Corps commissioned personnel stationed at Post Field are as follows:

Lieut.-Colonel J.N. Reynolds, Air Corps Instructor at Field Artillery School.

Captain Ira R. Koenig, Commanding Officer, Air Corps Troops and 1st Balloon Squadron.

Captain W.C. Farnum and 1st Lieut. H. McCormick, 1st Balloon Squadron.

Captain D.G. Stitt, Commanding Officer; Captain P.C. Wilkins; 1st Lieut. W.E. Karnes, and 2nd Lieut. H.F. Gregory, Flight E, 16th Observation Squadron.

---oOo---

LARGE CLASS AT THE TACTICAL SCHOOL

The Present class at the Air Corps Tactical School, Maxwell Field, Montgomery, Alabama, is one of the largest in its history, comprising 50 Air Corps officers, 5 officers from other branches of the Army, 3 Marine Corps officers, one officer from the Mexican Air Force and two officers from the Turkish Army.

---oOo---

HEAVY AIR TRAFFIC AT MAXWELL FIELD

The Operations Dispatcher at Maxwell Field, Montgomery, Ala., reports that a total of 119 airplanes arrived at and departed from that station from other Air Corps posts between January 1st and 15th. This heavy air traffic was due to the Air Races at Miami, Fla. The visitors were gladly welcomed and many friendships begun years ago at other stations were renewed.

V-6718, A.C.

TEMPORARY PROMOTION AND STANDARDS OF FLYING PROFICIENCY FOR AIR CORPS OFFICERS.

A statement recently issued by the War Department announces that the Hon. George H. Dern, Secretary of War, has now approved a plan submitted by General Douglas MacArthur, Chief of Staff, in accordance with the report of the Special War Department Committee, headed by the Hon. Newton D. Baker, which will inaugurate a system of temporary promotion in the Air Corps based on non-availability of officers of suitable permanent rank, and provide just reward and compensation for those performing duties and bearing responsibilities of higher rank.

Enumerated among the more important positions included in this policy is the Commander of the G.H.Q. Air Force, whose rank will be either that of Brigadier-General or Major-General. His Chief of Staff will have the rank of Colonel, and four General Staff officers the rank of Lieut.-Colonel.

The rank of Brigadier-General will go to the commanders of the 1st and 2nd Wings, and that of Colonel to the commander of the 3rd Wing, and the commanders of the Composite Wings in Hawaii and the Panama Canal Zone. The Chief of the Materiel Division and the Director of the Air Corps Training Center will have the rank of Brigadier-General, as now permanently provided by law. The rank of Colonel or Lieut. Colonel will go to the Directors of Engineering, Procurement, Supply, etc.; Depot Commanders; heads of various schools; senior staff officers on the staff of Department and Corps Area Commanders. Station complement commanders will be Colonels, Lieut.-Colonels or Majors; Group Commanders will be Lieut.-Colonels; Squadron Commanders, Majors, and Flight Commanders, Captains. The policy also includes increased rank for many minor positions.

The War Department statement goes on to say that the reorganization of the Army Air Corps in 1926 and that now under way pursuant to the recommendations of the Special War Department Committee create many occasions where junior Air Corps officers are called upon to perform duties and bear responsibilities of positions normally involving higher rank and compensation. This situation was recognized by the Congress in 1926, when it passed the Air Corps Act, but its provisions with respect to temporary increased rank have heretofore been held in abeyance.

STANDARDS OF FLYING PROFICIENCY

The War Department Committee for the Army Air Corps made the following special recommendations relative to the flying proficiency of the individuals of the Army Air Corps:

"All Air Corps officers of 15 or less years' service should be qualified pilots. A standard qualification should be established administratively for all Air Corps officers of 15 or less years' service in the Air Corps who are placed on flying duty. This standard qualification should include annual flying as pilots of not less than 100 hours, including a reasonable percentage of cross-country, instrument, night and formation flying. Except-

tions to these requirements should be made only by the approval of the Secretary of War in each specific case. Those not qualified to meet the standard qualifications should be utilized or disposed of in accordance with the following paragraph:

"After 15 years of service, all Air Corps officers should be tested periodically by a qualified board, to determine their qualifications as flying officers. Those capable of meeting the conditions given in (8) above, and others as deemed desirable, should be declared eligible as pilots for flying command duty, that is, to command combat squadrons and groups.

"Those found disqualified as pilots for flying command duty, unless coming within the provisions of existing retirement and Class B laws, should be divided into two groups - (a) those capable and qualified for nonpiloting duty in the Air Corps; (b) those not capable or qualified for piloting or nonpiloting duty with the Air Corps.

"The non-piloting group referred to above should include those deemed qualified for such duties as high command and staffs in the Air Corps, senior officers of the engineer group and procurement-supply group of the Air Corps. They should be required to continue aerial experience and fulfill the legal requirements to draw flying pay.

"Those disqualified for Air Corps duty as per (b) above should be given the option of transferring, if qualified, to a ground branch of the Army, or retiring with $2\frac{1}{2}\%$ of their base pay per year of commissioned service up to 75 percent."

Secretary of War George H. Dern has approved a policy submitted by General MacArthur to carry these recommendations into effect. This policy has been concurred in by General Foulis, Chief of the Air Corps, and Lieut.-Colonel Andrews, designated as Commander, G.H.Q. Air Force.

The plan prescribes a standard of flying proficiency which requires all rated airplane pilots of the Army Air Corps on a flying status to fly --

A minimum of 100 hours per year in compliance with the provisions of the current annual training directive, including a minimum of

(1) 35 hours' avigation, including one flight of at least 500 miles with a minimum of two intermediate landings. Personnel stationed within the continental limits of the United States will make not less than two flights of at least 200 miles each over the Department of Commerce Airways, using the radio avigational aids and communication facilities thereof. Where practicable, flights over the Department of Commerce Airways may be combined with the required flight of 500 miles.

(2) 10 hours' instrument flying, including a minimum of 5 hours under the hood.

(3) 10 hours' night flying, including a night avigation flight of 2 hours' duration.

(4) 5 hours' formation flying.

Commanding Generals of Overseas Departments are authorized to eliminate the 500-mile avigation flights, if the physical and geogra-

V-6718, A.C.

phical limitations of their departments are such as to make this requirement unduly hazardous. Any other reasonable avigation requirement deemed desirable by a Department Commander may be substituted therefor. Where such substitution is made, the War Department will be informed of its nature.

The flying indicated in each category above will be in accordance with Technical Regulations prescribed by the Chief of the Air Corps.

In addition to those rated airplane pilots, the following classes of Air Corps personnel will be required to fulfill the requirements of this paragraph in accordance with their flying ratings as to hours and types of missions with the exception of instrument flying under the hood:

- (1) Those holding both pilot and observer ratings but flying on observer status.
- (2) Airplane observers.
- (3) Balloon observers (not on duty with a balloon squadron).
- (4) All other personnel on flying status except student personnel at the Air Corps Training Center.

In order to check the degree of compliance with the prescribed standards, the Secretary of War will appoint not later than June 30th annually two boards of three field Air Corps officers each for the administrative examination of Air Corps officers as indicated below. One board will function for all personnel assigned to the G.H.Q. Air Force and the other for all personnel not so assigned; these boards to be known as --

Flying Proficiency Board, Office, Chief of Air Corps.

Flying Proficiency Board, G.H.Q. Air Force.

These boards will classify personnel as follows:

Those who have complied with the standard of flying proficiency and are qualified for piloting and flying command duty.

All others grouped into classes as indicated below:

Those eligible for piloting and/or flying command duty, that is, to command squadrons and groups.

Those capable and qualified for non-piloting duty in the Air Corps. This non-piloting group will include those deemed qualified for such duties as high command and staffs in the Air Corps, combat duties other than piloting, and senior officers of the engineer group and procurement-supply group of the Air Corps.

Those not capable or qualified for piloting or non-piloting duty with the Air Corps.

The Boards will also classify the following into the groups indicated above:

Airship and balloon pilots. The standard of flying proficiency for this group will be prescribed by the Chief of the Air Corps.

All officers who on June 30, 1935, have been suspended or removed from flying status for physical or other reasons.

Non-rated officers of the Air Corps not on flying status.

The Boards will make a detailed examination of flight records of Air Corps personnel on flying status and of such other evidence bearing on the individual's flying proficiency as

may be obtainable. The Board will give careful consideration to the availability of flying equipment and other local conditions.

The proceedings will be submitted to the War Department for final action through the Chief of Air Corps and the Commanding General, G.H.Q. Air Force, respectively.

After action by the War Department on the reports of the boards, each individual found to be not capable or qualified for piloting or non-piloting duty with the Air Corps will be so notified.

Where the individual objects to this classification, he will so notify the War Department, when the necessary instructions for a flight test will be issued.

Results of flight tests will be forwarded to the board which recommended the classification of the individual. The board will then, after a complete review of the flight test report, make specific recommendation as to the classification in which the individual should be placed as a result of the flight test. The proceedings will then be forwarded through channels to the War Department for action by the Secretary of War, which action will be final.

No officer will be removed from flying status as a result of the process described above until his case has been acted upon by the War Department. Those officers found finally not capable or qualified for piloting or non-piloting duty with the Army Air Corps will be utilized for ground duty in the Air Corps, or on other duty unless physically or otherwise disqualified.

---oOo---

AERIAL REVIEW FOR MAJOR GENERAL MALIN CRAIG

On the same day that Amelia Earhart landed at Oakland in her trans-Pacific flight from Honolulu, the entire 17th Pursuit Group of March Field swooped down upon Hamilton Field at 10:40 a.m., for refueling. The absence of the fast Martin Bomber among the 39 Pursuit planes, which is the plane of the First Pursuit Wing Commander, Lieut.-Colonel Henry H. Arnold, was noticeable. The Wing Commander had flown to Crissy Field, where he picked up the Corps Area Commander, Major-General Malin Craig, well known to soldiers of the World War as the Chief of Staff of the Third Army. In less than half an hour, the 39 planes had been serviced at Hamilton Field, and they joined the Wing Commander in a simulated attack on San Francisco, which was really an air review in honor of the 9th Corps Area Commander, General Craig, who will leave soon on a General Staff assignment in Washington.

As an aftermath of the review came the return of the 17th Pursuit Group to Hamilton Field at 1:15 p.m. The visiting pilots were the guests of honor at a celebration during which the new Officers' Club at Hamilton Field was dedicated. On the following afternoon, at 1:00 o'clock, the entire Group flew back to March Field to be ready for the duties of the coming week.

V-6718, A.C.

There is reprinted here excerpts from an interesting article on the above subject, written by Mr. Edward J. Minser, Chief Meteorologist, T.W.A., Inc., and published in the Air Commerce Bulletin of December 15, 1934. Mr. Minser states that two primary conditions must exist in the free air before ice will form on aircraft, namely, that moisture must be present in visible form, and the air temperature must be 34° F. or less. While ice has formed at higher temperatures, instrumental error or lag in the thermometer is undoubtedly a contributory factor. Where frost has formed in clear air it is due to a cold aircraft entering a warmer air mass of high humidity. In either of these two conditions, ice formation is generally light and of slight hazard.

Ice is classified in three types - clear or glaze, rime and frost. Clear ice, smooth and glassy in appearance, may be rough if formed in the presence of sleet or snow. Very tenacious and difficult to break loose, it has been known to form at the rate of one inch per minute in the presence of snow. Freezing rain always forms as clear ice.

Rime, a white opaque ice forming along entering edges and building out in an irregular sharp-nosed mass, is ordinarily easily removed by vibration and shock, but at very low temperatures its tenacity increases and the formation if prolonged reaches dangerous proportions.

Frost, a light crystalline formation, never assumes any degree of magnitude and generally disappears as soon as the aircraft reaches the same temperature as the air through which it is flying.

From reports on numerous icing conditions, it was noted that clear ice formed in clouds of warm air mass origin while rime generally occurred in cold weather mass clouds. In clouds forming in air with the temperature below freezing, the water vapor available never exceeds 5 grams per cubic meter, this amount decreasing rapidly with decrease in temperature. A cloud forming from warm moist air will be composed of large droplets, densely distributed throughout the cloud, while cold moist air will result in a cloud of small droplets widely dispersed. Therefore, in flying through a warm air mass cloud, considerably more water will be encountered per unit area.

Since ice does not form above a temperature of 34°, the freezing of condensed water presents the most interesting and also puzzling process of ice formation. The change of the water droplet to ice on collision with an airplane appears to depend largely upon the evaporation process of lowering the temperature. It is known that water can be cooled far below the freezing point and still retain its liquid form, but a slight disturbance will immediately change it to ice. The presence of saline substances in free air droplets tends to lower the freezing point, so apparently the state of such a liquid is simply one of reduced freezing point.

When a droplet, which has been super-cooled,

strikes an airplane, a portion thereof immediately changes to ice, and the temperature of the slush mixture tends to rise to the freezing point, since any mixture of ice and water assumes that temperature. To freeze the remaining water, the heat of fusion is absorbed by means of evaporation and/or absorption by the structure of the airplane and/or cooling by the passing air stream.

Since in areas of strong convection, we can expect to find the largest cloud droplets and greatest amounts of liquid water, clear ice will occur if the temperature is below 34°F. To avoid dangerous icing it will only be necessary to avoid such areas. Generally, in winter over level country, except in thunderstorms of marked intensity, vertical convection diminishes rapidly at levels above 10,000 feet, and therefore the size of supported droplets and the cloud density will also diminish rapidly. At these levels also, the temperature is far below freezing and rime ice will be the general form. Certainly this becomes a far safer flight path than at lower levels.

Since a cold aircraft will accelerate ice formation, a climb from a cold air strata through a warmer dense cloud demands caution. On entering such a cloud, every droplet encountered will freeze almost instantly and only several minutes will be necessary to load a plane with ice. If climb is maintained at the maximum rate permissible, the inversion above the cloud may be reached before ice has formed to a dangerous degree.

The fact that ice will evaporate in clear air at subfreezing temperatures should always be borne in mind. When ice has formed it can usually be removed by evaporation in the clear air above or below a cloud strata. However, if precipitation in the form of rain occurs, increased ice will result, and this danger should not be lost sight of, as the formation will be rapid. Snow in clear air does not form ice at sub-freezing temperatures.

---c0o---

ROCKWELL FIELD A BUSY PLACE

The Rockwell Air Depot is now busily engaged in making the necessary changes in the Martin Bombers. Aileron balance weights, controllable pitch propellers, and oxygen equipment are being installed. Two B-12's are being equipped with de-icers equipment for a cold weather test in the north this winter. The work is progressing rapidly, although "unusual" weather conditions have been quite a handicap since the lack of hangar space at Rockwell necessitates most of this work being done out of doors.

Captain S.J. Idzorek arrived at Rockwell Field from Panama and has taken over the command of the field. He found many old friends who have been eagerly awaiting his arrival from the time his orders were published.

Mr. Harold Gatty, until recently on duty in the Office of the Chief of the Air Corps in Washington, reported for permanent duty with the Advanced Aviation Training Unit. The officers of that unit will welcome his help in their pioneer work re. sun curves, stars, etc.

PROMOTION OF NONCOMMISSIONED OFFICERS

A list is given below of noncommissioned officers placed on the respective eligible lists for promotion to Master Sergeant and Technical Sergeant, Air Corps, January 1, 1935.

ELIGIBLE LIST

For Master Sergeant, Air Corps
Effective January 1, 1935

Technical Sergeants

No.		
1	Gail, Charles	73. Jackson, Paul B.
2	Bollinger, John	74. Roberts, Carl C.
5	Nikulaine, Ananias	75. Boijer, Richard E.
6	Cox, Fletcher H.	76. Filkins, Joseph A.
8	King, Benjamin J.	77. Schaeffer, Chris J.H.
9	Whiteside, Don W.	78. Peckham, Russell C.
10	Tayloe, Gust A.	79. Valtierra, Leobardo
12	Albee, Lidas H.	80. Gibbins, Stanley K.
15	Rogers, Richard	81. Glasscock, Harry
16	Napier, Wythe J.	82. Fisher, George H.
17	Tingle, Dan W.	83. Doward, Richard C.
18	Bothne, James N.T.	84. Jewell, Arvin B.
19	Adams, Arthur H.	85. Koziboski, Edward A.
20	Riley, William J.	87. Mueller, Charles
21	Arnold, George	88. Merian, August A.
22	Mooney, Harry	89. Fusz, Charles F.
23	Small, Ballard B.	90. Mathews, Daniel A.
24	St. John, Ruben	91. Himes, Olin C.
26	Maxwell, Edcil C.	92. Dreier, Elmer L.
27	Miller, Edward	93. Maroul, John J.
28	Wetteran, Edward W.	94. Von Euw, John B.
30	McKnight, Charles H.	95. Fitzgerald, John E.
31	Locher, Joseph H.	96. Moorhead, Wm. B.
33	Howe, Sidney C.	97. Cattarius, Adolph
34	McAndrews, John	98. Thomas, Robert H.
35	Malloy, Stephen A.	99. Tupper, Hobson
36	Hobson, Earl	101. Stolte, Arthur
37	Ceccato, Peter	102. Moore, Virgil
38	Walters, Clyde L.	104. Forrest, James A.
39	McNeely, Ralph	105. Hartley, Ernest N.
40	Wheeler, Adam L.	106. Randles, Arthur
41	Suggs, John M.	107. Scott, Elliott
42	Leffler, Charles H.	109. Akers, Thornton
43	Kendrick, Bryan J.	110. Hamilton, Robert E.
44	Carpenter, Ross	111. Gray, Henry E.
46	Kohn, Louis	113. Brees, William M.
47	Witsch, Henry A.	114. Dryer, Howard H.
48	Maloney, Philip E.	
49	Gordon, Frederick J.	
51	Moslander, Charles E.	
52	Swanson, Nels E.	
53	Wing, Richard E.	
54	Loyell, Clyde W.	
55	McGhee, Loyd H.	
56	Shepherd, Delana	
57	Tomberlin, George D.	
58	Ritenour, Ervin W.	
59	Schmidt, George E.	
60	Stein, Joseph J.	
61	Williams, Wallace H.	
62	Brown, Lee E.	
63	McCartney, George D.	
64	Herb, Donald P.	
65	Blais, James G.	
67	Cheska, Benjamin A.	
68	Turner, William	
69	Hopper, Walter S.	
70	Leary, Vernon G.	
71	Williford, Leon O.	
72	Apple, William V.	

First Sergeants

3	Sproesser, George
4	Hayes, Patrick J.
7	Van Houton, David H.
11	Weber, Lee R.
13	Dunlap, Roy C.
14	Danie, Thomas
25	White, Benjamin L.
29	Grimme, John P.
32	Crabsky, Walter
45	Harrison, George E.
50	Davids, Ewald
66	Hill, James W.
86	Stanowich, Steve
100	Jones, William L.
103	Casey, Patrick T.
109	Miller, Joseph J.
112	Harmon, William T.

ELIGIBLE LIST

For Technical Sergeant, Air Corps
Effective January 1, 1935

Staff Sergeants

No.	
1	Miller, Sidney
2	Moretti, Marcus F.
3	Coulbourn, James L.
4	Riffil, George W.
5	Urweider, Edward J.
6	Keogh, John
7	Ruryn, Benjamin F.
8	McIntire, Edward J.
9	Burton, George
10	Johnson, Carl L.
11	Teverbaugh, Lafa
12	Fogleman, Harley J.
13	Michler, Herbert
14	Lukowski, John
15	Farrar, Almon S.
16	Reynolds, Mark
17	Connolly, Michael E.
18	Vicsik, Victor
19	Zaphiro, Basil
20	Post, Leland
21	Miramontes, Leonard
22	Fitzpatrick, William
23	Morris, James
24	Dennington, Richard
25	Kirby, Henry
26	Srcte, Harvill B.
27	Jusko, Edward A.
28	Newman, Willie E.
29	Bikle, Charles R.
30	Smith, Forest
31	Ackerly, Horace R.
32	Roberts, Fred A.
33	Toohy, Thomas F.
34	McFadden, Arvel
35	Davis, John L.
36	Protivnak, Michael
37	Cobb, Besola
38	Mauro, John A.
39	Passwaters, Francis M.
40	Jones, George S.
41	Balacke, Harry
42	Capps, Dwight M.
43	Rice, Robert E.
44	McGraw, Mathew A.
45	Kerr, Raymond
46	Hooper, Asa C.
47	Shaw, Carrel L.
48	Richard, George M.
49	Joyner, Charles
50	Banas, Walter E.
51	Roziburski, Michael M.
52	Cheatham, Roy D.
53	Monroy, Philip P.
54	Cross, Charles M.
55	Sheffield, William K.
56	Gilbert, Claude M.
57	Franklin, Henry L.
58	Vielock, Adam J.
59	Oram, George H.
60	Roeske, Myron

Staff Sergeants (Continued)

61	Falls, Clyde L.	91	James E. Dearborn	121	Kunsch, Perry W.
62	Gardner, Edgar W.	92	Edwin J. McClellan	122	Hansen, Henry P.
63	Moss, Grover C.	93	John A. Marshall	123	Hammack, Robert W.
64	Barlow, Robert L.	94	Chauncey L. Anderson	124	Chaudron, Norvelle
65	Kirby, Louis A.	95	Harold B. Kannolt	125	Flower, Abraham
66	Langston, Wilbur E.	96	Paul D. Bennett	126	Bathey, George R.
67	Walton, Joseph L.	97	Fredericks, Joseph M.	127	Martini, Henry
68	Peacock, Floyd H.	98	Silva, Manuel	128	Yeager, Adolph C.
69	Morris, Reuben	99	Blunden, Golan R.	129	Carr, George W.
70	Hoffman, Leonard L.	100	Hynes, Samuel	130	Mickey, Everett
71	Malkemus, George D.	101	Brown, Walter D.	131	Criss, Karl W.
72	Yucius, Tony	102	Carlow, Harold F.	132	Huffman, Ernest J.
73	Fagan, Luther W.	103	Platt, Graham	133	Halterman, George W.
74	Greene, Robert H.	104	Laquatra, Leo	134	Purkins, Gerald M.
75	Williams, Leonard	105	Falk, John A.	135	Torney, Thomas P.
76	Harris, James S.	106	West, Henry L.	136	Schuette, Alfred E.
77	Hurst, Frank	107	Richardson, Homer L.	137	MacDermott, William K.
78	Paseman, Edwin	108	Hoppe, Helmar B.	138	Riviere, Jean E.
79	Wolfe, Jack	109	Deming, John B.	139	Witwicki, Kazimir M.A.
80	Barker, Arthur C.	110	Tuffly, Edward W.	140	Chinigo, Joseph
81	Kramberg, Joseph	111	Worthen, Ray E.	141	Peterson, Cayus P.
82	Mahnert, William	112	Boyles, James H.	142	Weeks, Alvin C.
83	Senter, Herman F.	113	Dossett, Elbert	143	Jolly, Arthur
84	Sloan, Miles B.	114	Cheatham, Charles W.	144	McKown, Floyd H.
85	Blesh, Earl S.	115	Hampton, Jack	145	McGhee, Lester L.
86	Fisher, Elmer H.	116	Morris, William C.	146	Norris, Walker W.
87	Bright, Clarence	117	Gorman, Andrew J.	147	Fagan, George M.
88	Skelton, Edward F.	118	Mondt, Howard	148	Newland, Gus V.
89	Masterson, John A.	119	Jensen, Oluf T.	149	Shoellhorn, Erhard
90	Benson, Harold P.	120	Leonard, Dale F.	150	Ray, Floyd F.

---oOo---

FRONTIER DEFENSE BASES FOR THE ARMY AIR CORPS

Under a Bill, H.R. 4130, introduced in the House of Representatives January 17, 1935, by the Hon. J. Mark Wilcox, of Florida, and which was referred to the Military Affairs Committee, the Secretary of War is authorized to locate and establish for the use and occupancy of the Army Air Corps on sites to be selected by him on land now owned by the United States or hereafter, under the authority of this Act, to be donated to the United States, ten military posts to be known as "Frontier Defense bases," one such post in each of the following areas as indicated below:

(a) New England area, in Maine, New Hampshire, Massachusetts, Rhode Island, or Connecticut.

(b) Southeastern Atlantic area, on the South Atlantic coast in the State of Florida.

(c) Gulf of Mexico area, in Louisiana or Texas.

(d) Southwestern Pacific Area, in the Southern part of California.

(e) Central Pacific area, in the State of California, north of San Jose.

(f) Northwestern Pacific area, in Oregon, Washington, or Idaho.

(g) Great Lakes area, in New York, Ohio, Michigan, Illinois or Wisconsin.

(h) Alaskan area, in the Territory of Alaska.

(i) Panama Canal area, in the Panama Canal Zone.

(j) Rocky Mountain area, in Utah, Colorado, or Wyoming.

Under this Act the Secretary of War is further authorized and directed to construct, in-

stall, and equip, or complete the construction, installation, and equipment, at each of said posts such buildings and utilities, technical buildings and utilities, landing fields and mats, and all utilities and appurtenances thereto, including removal of existing quarters, grading, drainage, roads, walks, aprons, docks, runways, ammunition storage, sewer, water, power, station and airdrome lighting, telephone and signal, fuel storage, and fuel distribution systems, transportation of personnel, and purchase, renovation, and transportation of materials, as in his judgment may be necessary to provide an air base for one wing consisting of one bombardment group and one coast defense group, or the equivalent thereof. The landing fields of each such base shall be constructed so as to be able to accommodate in an emergency at least 1,000 airplanes. The cost of each such base shall not exceed \$19,000,000.

To accomplish this project, a sum not to exceed \$190,000,000 is authorized to be appropriated, and the Secretary of War is authorized to accept on behalf of the United States, free of encumbrances and without cost to the United States, the title in fee simple to such lands as he may deem necessary or desirable at each of said sites to accomplish the purposes of this Act.

---oOo---

Approximately 1123 Army airplanes were flown on December 17th last to celebrate National Aviation Day.

Although recognizing the worth of several instances of heroic conduct on the part of Air Corps flyers during the past year, the Board of Officers which considers recommendations for awards and trophies in the Air Corps, recommended that the Cheney Award for 1934 should not be made, but that the award fund be permitted to accumulate in the custody of the trustee.

This Award, which is given each year for the outstanding act of valor, extreme fortitude or self-sacrifice in a humanitarian interest in connection with the operation of aircraft, and which carries with it an emolument of \$500, is most highly prized by officers of the Air Corps, Regular Army, Air Reserve officers, and enlisted men eligible to receive it.

"So high a standard of heroic self-sacrifice has been set by the previous winners of the Award, that the Board of Awards was of the opinion that this standard should not be lowered through the presentation of the Award for any but a most highly meritorious act," stated Major-General B. D. Foulcis, Chief of the Air Corps, who approved the recommendations of the Board. "Heroic acts were performed last year by members of the Air Corps which have been suitably recognized by other awards or citations, but just because the Cheney Award was available for donation was no cause for presenting it without considering the high purpose for which it was established."

The Cheney Award was established in memory of First Lieutenant William H. Cheney, Air Corps, who was killed in an air collision at Foggia, Italy, on January 20, 1918. The donors are Mrs. Mary L. Schofield, of Peterboro, New Hampshire, and Mrs. Ruth Cheney Streeter, of Morristown, N.J., mother and sister, respectively, of the deceased officer.

Thus far, three Air Corps officers, one Air Reserve officer and five Air Corps enlisted men have been recipients of the Cheney Award. The first award was made in 1927 to Master Sergeant Harry Chapman for conspicuous bravery in the airship ROMA disaster which occurred in February, 1922. Lieut. Uzal G. Ent, Air Corps, received the award for 1928 for his heroism during the National Elimination Balloon Race in that year. When the balloon was struck by lightning, Lieut. Evert, the pilot, was instantly killed, and the balloon caught fire. Instead of jumping with his parachute, Lieut. Ent, mindful of the danger of the balloon exploding any minute and unaware of the fact that Lieut. Evert was beyond all help, remained in the basket and endeavored to revive him.

Lieut. William A. Matheny received the Cheney Award for 1929, Private John B. Smith for 1931, Private Arden M. Farley for 1932, and 2nd Lt. William L. Bogen, Air Reserve; Staff Sergeant Roy D. Dodd and Sergeant Thomas J. Rogers for 1933. The circumstances connected with the Award for these years were those involving heroism in rescuing imperiled airmen from the wreckage of burning airplanes. The award for 1931 was also presented to the late 1st Lt. Robert D. Moor, Air Corps (posthumously) who, on August 23, 1931, gallantly sacrificed his

life while pilot of an airplane forced down out of control. He gave up his own opportunity to escape by urging and succeeding in getting his passenger to jump with his parachute to safety. That accomplished, it was too late for him to jump. No award was made for the year 1930.

Although the income from the trust fund exceeds \$500 per year, which is the amount of the cash donation, the remainder, including the unawarded sum for 1934, is placed in a sinking fund for possible use in case more than a single individual is recommended for the award, as was the case for the years 1931 and 1933. In addition to the cash consideration, each recipient of the Cheney Award is presented with a bronze plaque with his name engraved thereon, also an engraved Certificate of Award describing the heroic deed performed.

---oOo---

ENLARGEMENT OF SCHOEN FIELD

The Regular Army field at Fort Benjamin Harrison, Indiana, has been enlarged from 95 to 210 acres, according to an article submitted by Captain Stanton T. Smith, Air Corps, Commanding Officer of that field.

From a rough, rolling, muddy field, of about 95 useful acres, Schoen Field, 10 miles northeast of Indianapolis, Indiana, has been increased to 210 acres, half of which has been graded and tile drained. Though it is still rolling, it is smooth surfaced, and all approaches have been made much safer through tree removals around the edges.

Schoen Field has been made a rectangular field, 3/4 of a mile long and 1/2 mile wide, with no obstacles on the west end, and the nearest obstacle 125 yards on the north, leaving a clear triangle of about 400 yards at the longest approach, varying to zero at the shortest approach at the south edge, and 30-foot telephone lines on the east side.

All types of modern ships, including P-26, P-12 and P-30 Pursuit airplanes, A-8 and A-12 Attack, and several types of Bombardment, Transport, and Observation ships have landed without difficulty from obstacles or mud.

The rolling surface is a great aid to drainage, and at no place is the slope greater than 18 inches to the 100 feet, the average slope being about one foot to the 100 feet, with tiles through the bottoms between slopes to carry away the underground water, which in Spring is about four feet underneath the surface.

This work has been made possible by an average of about 50 men under CWA and FERA control for the past year and at the present time there are about 70 FERA men with shovels and wheelbarrows removing all the small knolls and smoothing out the small hollows, making excellent grass runways that even the softest conditions will safely handle everything but the heaviest Transports and Bombers.

Due to the fact that the commander of the 309th Observation Squadron, Major C.E. Cox,

Air Reserve, is manager of the Indianapolis-100-acre airport, which is equipped with modern 2000 feet by 100 feet runways, arrangements can be made to service any large ship forced down at Indianapolis during the spring thawout that might make concrete runways necessary, as the Schoen Field service truck with gasoline and oil can reach that airport in 45 minutes for any emergency, and a crew with truck and trailer is available to care for any crashes within a hundred miles of Indianapolis.

One Regular Army officer, 8 enlisted men and 2 Civil Service employees are stationed at Schoen Field, which is a Regular Army station on the Fort Benjamin Harrison reservation and serves as the training station for the Indiana Reserve units.

Ten thousand gallons of aviation gasoline and five hundred gallons of both winter and summer oils is the average stock of fuel on hand and accessories for the standard type engines are regular stock. Two hour emergency service from the Fairfield Air Depot at Patterson Field is available.

Field boundary and flood lights are due for installation within 60 days, making both day and night service available for all types of ships, and the Fort Benjamin Harrison water tower and radio masts are clearly lighted by ruby red globes. Officers' quarters in the Schoen Field Officers' Club are available at 25¢ per night per person for visiting officers and their families.

Through the benefits of the Recovery organizations, Schoen Field and many municipal fields in Indiana are very much improved for landing safely. The Army is benefited through tactical efficiency of the Air Corps due to the increased number of auxiliary and municipal fields for maneuvers, and the country through the funds spent in preparing them and the increased safety for the commercial pilot.

---oOo---

ATTACK PERSONNEL RETURN FROM MIAMI

A flight of 12 airplanes returned to Fort Crockett, Texas, January 16th from Miami, Fla., where demonstrations were given of Attack formations and other tactical exercises in connection with the All-American Air Races. The flight left Fort Crockett January 7th, going and returning via Baton Rouge, La.; Pensacola, Tallahassee and Lakeland, Florida. Third Attack Group personnel participating were Maj. E.L. Naiden, 1st Lieuts. D.W. Mayhue, T.L. Mosley, 2nd Lieuts. P.H. Robey, K.R. Crosher, L.C. Westley, J.E. Davies, F.E. Calhoun, M.S. Savage, P.G. Meisenholder, G.M. Murchison and Bob Arnold. Major F.C. Venn, Medical Corps, accompanied the flight. The enlisted men were Master Sergeant A.H. Holtzman, Staff Sergeants W.F. Meriweather, S.J. Krovontka, J.J. Lioheay, K.A. Huber, L. Miramontes, Technical Sergeant J.A. Filkins, Sergeant J.A. Filkins, Sergeant J.D. Stephenson, Corporals W.C. Grimsley and H.F. Vandergrift.

---oOo---

Major Martin F. Scanlon, A.C., returned to familiar surroundings on Jan. 15th, and assumed command of Bolling Field, D.C. He previously commanded this field, July 20, 1919 to Aug. 18, '22.

NEW CONSTRUCTION AT MIDDLETOWN AIR DEPOT

Construction of the new officers' quarters at the Middletown, Pa. Air Depot has been completed, and the officers of the post have moved into them. These quarters are modern and up-to-date in every respect, and are superlatively comfortable as compared with the temporary wartime constructions previously used as officers' quarters. The new company officers' sets have garages built as separate structures. In the field officers' sets, however, a garage is incorporated as part of the structure of each set of quarters.

The total construction of new quarters completed includes two field officers' sets, six double sets for company officers, and one double set for warrant officers, a sufficient number adequately to house all the commissioned personnel of the Depot.

In addition to the new quarters, a new Officers' Mess has been completed, and is gradually being furnished. A squash court has also been built, and a tennis court is in process of construction.

Other construction projects on the post are proceeding rapidly toward completion. A new Headquarters Building has been constructed and is now occupied. New roads are being built and street lighting installed. A new, very modern, completely equipped Engineering Unit has progressed about 95 percent toward completion, and it is expected that this Depot will eventually have an overhaul capacity of 50 airplanes and 75 engines per month. The old Engineering Unit, which is in the vicinity of the new officers' quarters, will be razed, and the area it now occupies will be graded and landscaped.

Olmsted Field has been considerably improved during the past few months. Numerous hazards to flying have been eliminated, and low areas in the field have been filled and graded. An improved night lighting system has been installed, complete with remote controls located in the telephone exchange to permit operation of the system at any hour of the night as needed. After the old Engineering Unit is removed, the field will be further extended.

These new structures fill sorely felt needs, and will add immeasurably to the efficient operation of the Depot. In both design and construction, the new buildings are a credit to the Quartermaster Corps, which was responsible for their erection, and to the Air Corps, which will use them the more efficiently to render service to the G.H.Q. Air Force and other Air Corps activities.

---oOo---

Three members of the Third Attack Group, 1st Lieut. H.M. Bailey, 2nd Lieuts. H.P. Huglin and P.D. Bunker, Jr., are now under orders to take part in the Cold Weather Test Flight, based at Selfridge Field, using 3 Curtiss A-12 planes. They will proceed to Selfridge Field by way of Wright Field, where special equipment is to be installed. Staff Sgts. R.D. Duggar, N.F. Miltz and Corp. H.N. Scales, Jr., will accompany the pilots.

V-6716, A.C.

CHIEF OF THE AIR CORPS DECLARES G.H.Q. AIR FORCE A FORWARD STEP

The "Minute Man" in its next issue will carry an article on the Army Air Corps, to which, upon the request of the editor of that publication, General Foulcis contributed the following foreword:

The action recently taken by the War Department in putting into operation the plans which have been in course of preparation for a number of years to organize a General Headquarters Air Force, to include all the tactical combat units of the Air Corps stationed in the continental United States, is the most important and forward looking single step ever taken to secure a military air unit of adequate striking power to insure to the United States a proper defense in the air.

This force will be of a strength and have a cohesive control, uniform training, unified command and readiness for active operations which will permit the Chief of Staff, under whom it serves directly, to employ it immediately upon the occurrence of a major emergency, with all the advantages to be secured by observing the principles of war. Of these principles, the concentration of effort, the objective, surprise, the offensive and security are of primary importance, and the mobility of aircraft is such as to permit a skilful leader to apply these principles with telling effect.

The administration of all these tactical units under a single command affords, also, greater facility in peace time operation in all that pertains to technical control and Air Corps supply. It gives to the Chief of the Air Corps, as well as to all others in the War Department who are concerned with the technical control and supply of the G.H.Q. Air Force, a single responsible headquarters to deal with.

It is believed that more rapid progress may now be expected in improving the technical efficiency and completing the equipment of the G.H.Q. Air Force. These developments justify the people in feeling that their home defense in the air is now in process of being placed upon a sounder and more adequate basis than has obtained in the past.

---oOo---

INSTRUMENT FLYING VERY HELPFUL IN OPERATIONS

The "Stark System" of instrument flying is now being taught at the Air Corps Advanced Flying School at Kelly Field, Texas. The SCR-183 radio sets installed in the BT airplanes at this School are functioning very satisfactorily and local facilities are ample for all pilots and students to obtain training in both beacon flying and radio orientation. "Our limited experience has already helped many of us during the morning 'weather flight' to 17,000 feet," says the News Letter Correspondent, and he then adds: "Another instance was a recent search organized for a missing pilot and airplane. Radio telephone communication with Kelly Field was maintained up to 150 miles from the field and searching airplanes were constantly talking to each other. In all, some 37 airplanes were sent over different routes and all control remained at Kelly Field.

During the air races at Miami, there was among others one flight of seven BT-2B airplanes equipped with SCR-183 sets. On account

of weather conditions the elements of this flight took off at different times and by means of radio assembled in the air for control. One of the most outstanding features of this flight to Miami was the remarkable performance of this SCR-183 set. The performance consisted of approximately 30 continuous radio flying hours without a single failure or interruption of communication all the way from Kelly Field to Miami and return, there being no maintenance or inspection of the radio equipment. Another noteworthy instance of radio communication performance encountered during this flight was that while flying toward the Pensacola Naval Air Station, Selfridge Field was heard giving Maxwell Field an O.K. on signal strength with an R-5."

---oOo---

A Bill (H.R.4129) was introduced in the House by Hon. C.I. White, of Idaho, authorizing an appropriation of not to exceed \$4,000,000 for the establishment of an Air Depot near Lewiston, Nez Perce County, Idaho.

V-6718, M.C.

LIEUTENANT-COLONEL HORACE MEEK HICKAM

The following brief sketch of the life and service of the late Lieut.-Colonel Horace M. Hickam, Air Corps, has been prepared for the Annual Report of the Association of Graduates of West Point:

On the historic slopes of Arlington, on November 10, 1934, a vast throng of the friends of Lieutenant-Colonel Horace M. Hickam, Air Corps, gathered to pay him the last earthly tribute. His death occurred while performing the duty he so much loved, when his airplane struck a slight embankment in landing at the post he commanded, Fort Crockett, Texas. His untimely death deprived the service of an outstanding and brilliant officer at the very threshold of a still wider usefulness.

Colonel Hickam was born at Spencer, Indiana, August 14, 1885, the son of Willis and Sally Meek Hickam. His father was a lawyer in Spencer, and Horace attended grade school and high school there. Upon completing high school he attended Indiana University for one year, receiving his appointment to the U.S. Military Academy while there, in 1904.

He spent four years at West Point, where he excelled in football, track, and gymnastics, and graduated well up in his class in 1908. He was commissioned 2nd Lieutenant, February 14, 1908, and assigned to the 11th Cavalry. On April 20, 1912, he married Helen Bamber, of Toledo, Ohio, of which union two children were born, Martha Agnes, May 11, 1913, and John Bamber, August 10, 1914. After his marriage he served in the Philippine Islands, where his son was born. Upon returning to the United States he served with General Pershing in Mexico, as a member of the 7th Cavalry, and received the Silver Star Citation for gallantry in action against Cervantes' band of Villistas, at Tomochic, Mexico, April 22, 1916.

During the World War he entered aviation as a temporary Major in the Signal Corps, receiving his commission on August 5, 1917. He qualified as a Junior Military Aviator at Rockwell Field, Calif., and was then assigned to the command of Dorr and Carlstrom flying fields, at Arcadia, Florida.

After the Armistice, Colonel Hickam was assigned to duty in Washington, D.C., as Chief of the Information Division of the Office of the Director of Air Service. From then onward his duties became increasingly important and he discharged them in a manner to win the highest praise of every immediate superior and the admiration and affection of all those with whom he served. Just prior to his last command at Fort Crockett, Colonel Hickam served four years as a member of the War Plans Division of the War Department General Staff. When he left this duty in July, 1932, he was given a letter of highest commendation by General MacArthur, Chief of Staff.

One of the thrilling experiences of Colonel Hickam's varied career was a mid-air collision with the plane of Major Geiger, Air Corps, a fellow student at the Air Corps Tactical School, during formation flying on May

10, 1926. Both officers took to their parachutes and landed safely albeit Hickam's airplane had been cut almost to pieces by the propeller of the other ship. This initiation of Colonel Hickam into the famed Caterpillar Club occurred in the presence of a large assemblage of officers, enlisted men and news cameramen gathered to witness the formation flying and tactics of the School.

The passing of Colonel Horace Hickam leaves a gap in the ranks of the Army's flyers which can never be filled. Every man was his friend and admirer, and all are a unit in unstinted praise of his life and accomplishments.

---oOo---

AIR CORPS OFFICERS AT FT. LEAVENWORTH, KANS.

It is not generally known, or realized, that about 40 Air Corps officers are on duty at the Command and General Staff School at Fort Leavenworth, Kansas. Four officers are members of the school faculty, 16 are students in the second year class, due to graduate in June, 1935, and 17 are in the first year class, due to graduate in June, 1936. The remaining three officers are on duty with the Air Corps Detachment, there being a sizeable airdrome with cinder runways and a modern double sized hangar on the post.

The officers on the faculty of the school are Lieut.-Colonel George H. Brett, Majors Thomas J. Hanley, Jr., George E. Stratemeyer and Captain William E. Farthing.

Air Corps students in the second year class are Majors William O. Butler, Howard C. Davidson, Hubert R. Harmon, Hubert V. Hopkins, John C. McDonnell, Captains Earl DeFord, Idwal H. Edwards, Sam L. Ellis, George F. Johnson, Harry A. Johnson, Frank M. Paul, Lowell H. Smith, Ralph H. Wooten, John R. Morgan, Robert Olds, and 1st Lieut. Kenneth N. Walker.

Air Corps officers in the first year class are Majors Carlyle H. Wash, Donald Wilson, Harry H. Young, Captains Charles Y. Banfill, John DeF. Barker, Roland Birn, Robert G. Breene, Byron T. Burt, Jr., Howard A. Craig, James T. Curry, Jr., James P. Hodges, Arthur B. McDaniel, Vincent J. Meloy, George M. Palmer, Howard K. Ramey, Charles McK. Robinson and Dayton D. Watson.

Air Corps on duty with the Air Corps Detachment are Captain Younger A. Pitts, Lieuts. Eugene H. Rice and James L. Jackson.

A list of Air Corps officers who are to attend the next class at the Command and General Staff School is given elsewhere in this issue of the News Letter.

---oOo---

Col. Jacob W.S. Wuest, Air Corps, will shortly assume command of Rockwell Field, Calif., War Dept. orders recently issued relieving him as Military Attache to Germany, Sweden, Norway, Denmark and The Netherlands, from station at Berlin, Germany, and from duty as Asst. Military Attache for Air to Austria, Switzerland and Czechoslovakia, effective on or about April 13th.

BILL CREATES AIR CORPS PROMOTION LIST

The creation of a separate promotion list for the Army Air Corps is the purpose of a Bill (H.R. 4351) introduced in the House of Representatives by the Hon. John J. McSwain, M.C., of South Carolina.

Under the provisions of this Bill, the names of all officers of the Air Corps of the Regular Army below the grade of colonel will be placed on the list and arranged in the same relative order they now have on the Army promotion list. No officer whose name appears on the original Air Corps promotion list shall be considered as having less commissioned service than any officer whose name is below him on this list. All officers commissioned in the Air Corps after the formation of the original Air Corps promotion list shall be placed thereon in accord with length of commissioned service. Any officer whose position on the Air Corps promotion list is changed by sentence of a general court-martial or by law shall be deemed to have the same commissioned service as the officer next below whom he may be placed by such change.

In the matter of promotion, Air Corps officers when credited with 3 years' commissioned service, provided they are flying officers, shall become 1st Lieutenants; after 7 years' commissioned service, Captains; after 12 years' commissioned service, Majors; after 20 years, Lieutenant-Colonels, and after 26 years, Colonels. All flying officers of the Air Corps below the grade of Colonel shall be promoted in the order of their standing on the Air Corps promotion list.

Limitations as to the number of officers in the various grades is prescribed as follows: The number of Colonels shall not be less than four nor more than six percentum, and the number of Lieut.-Colonels not less than five nor more than eight percentum of the total number of officers on the Air Corps promotion list, and the aggregate number of Air Corps officers in the grades of Colonel, Lieut.-Colonel and Major shall not be less than 26 nor more than 40 percentum of the total number of officers on the promotion list. The Bill authorizes promotions to these three grades of Air Corps flying officers of less than the required years of service only insofar as it is necessary to maintain the minimum percentage in the field officer grades. Nonflying officers shall be promoted as provided for other branches of the Army.

When application is made to the President, Air Corps officers may be placed on the retired list after 30 years' service. However, except in time of war, in computing length of service for retirement, credit shall be given for one and one-half the time heretofore or hereafter actually detailed to duty involving flying, and credit shall also be given for all other time now counted towards retirement. The number of such retirements annually shall not exceed six percentum of the authorized strength of the Air Corps.

When a flying officer of the Air Corps reaches 54 years of age, he may, upon application to the President, be placed on the retired

list. Those who may become physically disqualified for the performance of their duties as flying officers shall be eligible for retirement for physical disability.

An Air Corps officer, upon request, may be transferred to another branch of the service, in which event he shall take rank and grade therein in accordance with his length of commissioned service as computed under existing laws governing the branch to which transferred.

---cOo---

AIR CORPS TROOPS MOVE INTO HAMILTON FIELD

On the crisp afternoon of December 4th, the organizations of the 7th Bombardment Group, with full packs, entrained at March Field to the stirring beat of a drum corps. The guidons told that Hqrs. 7th Bomb. Group, the 9th, 11th and 31st Bomb. Squadrons were evacuating their quarters at March Field for the occupation of their new habitat at Hamilton Field.

The trip terminated on the afternoon of the next day, when the white stucco walls of the new quarters at Hamilton Field amazed officer and soldier alike with the beauty of design and comfort, which was followed by a feeling of complete satisfaction when he stepped within his own quarters. The bunks has been set up for the soldier, and he had only to drag his bedding from the barracks bag to find himself a fit bed for the night. Succulent odors of fresh meats and vegetables coming from the kitchen assailed his nostrils. His appetite showed amazing proportions as he devoured huge portions of steak and spuds.

The columns arrived on the 5th. (The Bombers had been ferried down a few days previously). Organization was perfected in a few days, and the post and group assignments were made. Major Clarence L. Tinker, who brought the Group to the new station and became post commander, selected as his Post and Group Adjutant, Lt. Edgar T. Noyes, who had functioned as the Group Adjutant at March Field. Capt. Don L. Hutchins, commander of the field before Major Tinker's arrival, was appointed Post Executive Officer, and Capt. Lewis R.P. Reese as the Group Executive. Capts. Harold D. Smith and Arthur G. Hamilton resumed their duties as Commanders of the 31st and 11th Bombardment Squadrons, respectively. Capt. John M. Davies was assigned as C.O. of the 9th Bombardment Squadron, and Capt. Devereux M. Myers as C.O. of the 70th Service Squadron.

Situated in beautiful Marin County in the heart of the Redwood Empire, Hamilton Field is accorded the distinction of being the most beautiful of all Air Corps posts. Capt. Howard B. Nurse, Constructing Q.M., designed and built the field on a plan that took advantage of the natural beauty of the locale. For instance, the quarters of the officers, the hospital, the Officers' Club and many of the noncommissioned officers' quarters nestle among the hills, where fine old oaks and sloping grass plots set them off. The surrounding country is also very attractive.

THE MIAMI AIR MANEUVERS By an Observer

The Miami Air Maneuvers, held on January 10th, 11th and 12th, proved again that the City of Miami appreciates and honors the men whose lives are dedicated to military aviation.

The first arrivals at the Municipal Airport was an organization prepared to welcome and care for the visiting personnel, both civilian and military. There were a number of cars held inside the boundary of the field to provide immediate transportation from the airplane parking area to the locker rooms. Other cars were provided outside of the gates for transportation to and from the hotels. Transportation from the hotels to the field was easily obtained by a telephone call to the Transportation desk. For the safety of the flying equipment there was a check and locker room system installed in the north hangar. This system was operated without the loss of a single article.

Because of the low ceiling and poor visibility north of Miami, there was a delay of arrival of many units, thus the grand aerial review scheduled for the opening day was postponed until Friday, January 11th. The first day's program was not seriously curtailed, however, as each event was allowed more time than originally planned for the program.

The outstanding military event of the opening day was the precision demonstration performed by the so called "Men on the Flying Trapeze." This team from the Air Corps Tactical School, led by Captain C.L. Chennault, Senior Instructor in Pursuit Aviation at the School and Post Operations Officer, with 1st Lieuts. J.H. Williamson and W.E. McDonald, Air Reserve, as wing men demonstrated the ultimate in Element Team Work. Some of the maneuvers executed by this team required timing in terms of tenths of a second, while others required perfect flying technique at high speeds. The application of such timing and technique to the tactical formation exercises should produce an organization of maximum effectiveness in combat.

The team executed Immelmans, half rolls, single snap rolls, roll on top of a loop, spins in formation, the formation roll and a squirrel cage roll starting from a loop in Vee and concluding with a loop in Vee. The last named maneuver required the assembly of the element column during a series of three loops.

The demonstration staged by the Squadron of P-26's of the 1st Pursuit Group was a beautiful exhibition of squadron control and maneuver. Captain George P. Tourtellet, the squadron commander, issued his instructions by radio telephone from the leading airplane and successfully arranged his flights and elements in a number of perfect formations, the most striking of which was the "AO" composed of 17 airplanes. It was extremely regrettable that the bursting bomb maneuvers of this unit resulted in a number of airplanes flying over the grand stand at a very low altitude on the first day of the meet. While the action of the Department of Commerce official in grounding the Commander and Leader of the Pursuit

unit could be taken easily, the imposition of a fine of \$100 upon our kind host, the City of Miami, left a feeling of regret. The "grounding" of Captain Tourtellet was lifted in time for him to lead his squadron again on the second day of the Races, but Major Ralph Royce, commanding the 1st Pursuit Group, departed from Miami still "on the ground" as far as participating in the show was concerned.

The demonstrations staged by the flight of nine planes from the 3rd Attack Group were very impressive. This flight, under the leadership of 1st Lieut. Don Mayhew, swept down the field in echelon of elements, column of elements and flight line, leaving the spectators very much impressed with the speed and power of low flying aviation.

The Marines arrived during the demonstration of the 3rd Attack Group on the second day. Undaunted by the threat of an advancing line of Attack airplanes, the Marine squadron glided to a graceful landing just ahead of the Attack formation. Taking the air again near the end of the program, the Marine unit demonstrated a number of formations and then staged an interesting exhibition of dive bombing and smoke screen work.

This exhibition was educational as well as extremely spectacular from the viewpoint of the average citizen in the grandstand. Army Demonstration Units might place more emphasis upon maneuvers designed to educate the average citizen to the tremendous power of air force.

While the limited space available in this letter forbids a detailed resume of all the flying and social activities included in this year's program, the nice formation technique displayed by the National Guard Units and units from the Training Center cannot be overlooked. Likewise, the air races for civilian craft were both interesting and exciting. In fact, the entire program was complete with demonstrations and exhibitions worthy of All-American Races.

Entertainment features of the program were extensive and varied. Complimentary tickets to practically every amusement center in Miami were distributed to the visiting personnel upon arrival. Several balls, complimentary to visiting pilots, were held. The ball of the Arsnicker Club witnessed the reunion of old friends separated by years of service and the installation of Colonel Charles H. Danforth, the senior Air Corps officer present at the Races, as Chief War Hawk. The Mayor's dinner and ball was enjoyed by many. All pilots were entertained either on the beach or by private parties given by the residents of Miami, and some by both. Several of the visitors enjoyed the annual party of the War Birds.

The City of Miami certainly exerted its best efforts toward making the Air Maneuvers noteworthy events for every pilot who attended. Scores of citizens gave their time to this end, and no one who had contact with the Chairman of the Air Race Committee, Mr. R.V. Waters, can ever forget his unfailing courtesy or his unflagging

zeal for making the 1935 maneuvers an enjoyable and valuable experience to all concerned.

---oOo---

MAXWELL FIELD PURSUITERS AT MIAMI AIR RACES

By the News Letter Correspondent

Captain Claire L. Chennault, Air Corps, veteran Pursuit pilot at Maxwell Field, again led his wingmen through their usual thrilling performance at the Air Meet at Miami. According to the well known Reginald M. Cleveland, Air Writer, Maxwell Field's Pursuiters, who have been dubbed "The Men on the Flying Trapeze," held the crowd spellbound with acrobatics in formation. He says that the team, led by Capt. Chennault, with 1st Lieuts. John H. Williamson and William C. McDonald, Jr., Air Reserve, as wingmen, from the Air Corps Tactical School, did wing-overs, slow and snap rolls, loops, and finally a turn and a half of a spin with a perfection that seemed as if the three planes were activated by one mind.

This is by no means the first time our Pursuit Team has thrilled great crowds of spectators. They flew in the National Air Races at Cleveland and were featured on the program, following which they participated in the Georgian American Air Show held at Atlanta on Armistice Day. At Cleveland they were dubbed "The Men on the Flying Trapeze."

The original team was composed of Captain Chennault, 1st Lieut. Haywood Hansell, Jr. and 1st Lieut. John H. Williamson, Air Reserve, but Lieut. Hansell was detailed to pursue a course at the Tactical School and was replaced by Lieut. McDonald.

The total flying experience of the three flyers amounts to almost 10,000 hours, with almost thirty years in flying service, which makes for safety and enables the team to perform the most difficult maneuvers with the grace and ease which always characterizes its work.

Captain Chennault is Station Operations Officer at Maxwell Field, in addition to being Senior Instructor in Pursuit Aviation at the Tactical School. He has assembled and trained his Pursuit Team, and is certainly doing himself and the service proud by their remarkable performances.

While the team was at Cleveland, Roeliff Loveland, writer for the Cleveland FLAIN DEALER, composed the following which is thought most appropriate:

They float through the air with the greatest of ease,

These three army men called the "Flying Trapeze,"

They loop in formation, do vertical 8's, And the honors they've stolen away.

Oh, the snap rolls, both single and double, And the formation roll they complete, And they constantly court awful trouble, Though their movements are classy and neat.

A CORRECTION

In the article on the Caterpillar Club in the last issue of the News Letter, the number of jumps for 1919 was given as 22. The correct number is 2.

Oh, they float through the air just as straight as a rule,
These gallant young men from the Tactical School,
They have ten times the kick of the old army mule,
And the fair hearts they've stolen away.

---oOo---

COLORADO AIRMEN AT MIAMI AIR RACES

The National Air Races at Miami, Fla. were attended by the following members of the 120th Observation Squadron, Colorado National Guard: Major Virgil D. Stone, Captains Charles J. LaGue, William E. Hunter, Nollie Mumney, 1st Lieuts. Virgil W. Vaughan, George E. Batty, Henry S. Houghton and Master Sgt. Jack Burnell. Five airplanes were flown to Miami, and from the standpoint of training it was a wonderful trip. Of course, from all other standpoints it was a trip which will be held in fond memory for many years to come.

---oOo---

ADVANCED AVIGATION TRAINING AT ROCKWELL

A group of twenty officers from various posts throughout the Air Corps are now at Rockwell Field, Coronado, Calif., taking a short course (six weeks) in avigation training and instrument flying. They started school work on Monday morning, January 14th, and are in class from 8:00 a.m. until noon each day, the afternoons being spent in flying avigation missions over the Pacific or in taking training in instrument flying under the hood in one of Rockwell Field's specially equipped BT-1 airplanes.

---oOo---

CONSTRUCTION WORK AT MAXWELL FIELD COMPLETED

The 25 new sets of officers' quarters which have been under construction at Maxwell Field, Montgomery, Ala., have been completed and the last set turned over to occupants on January 7th.

This completes the projects for building at Maxwell Field, and with the grading and seeding of lawns nearly completed Maxwell Field will present one of the most beautiful and modern Army posts to sightseers.

---oOo---

BOLLING LANDING FIELD SHOWS IMPROVEMENT

The second week of January was a busy one at the operations office at Bolling Field, D.C., with many visitors from all over the country passing through the field enroute to and from their home stations. Many favorable comments were received on the improved condition of the landing field, due to the several runways which have recently been installed.

"While not the best of Air Corps landing fields," asserts the News Letter Correspondent, "Bolling Field can no longer be called the worst."

---oOo---

NEW FLYING CLASS AT RANDOLPH FIELD

A new class of 150 students will begin training at the Air Corps Primary Flying School at Randolph Field, Texas, on March 1st, next. This new class of Flying Cadets comprises 130 candidates from civil life, 16 enlisted men from the Army Air Corps and 4 enlisted men from other branches of the military service.

The course of instruction for Flying Cadets covers a period of one year at the Air Corps Training Center, primary and basic courses of four months each being given at Randolph Field and an advanced course of four months at the Advanced Flying School at Kelly Field, Texas. Upon graduating from the Advanced School, students are presented with their "Wings," given the rating of "Airplane Pilot," and assigned to duty for the period of one year, under their Flying Cadet status, with Air Corps Tactical units. At the end of that time, those Cadets who have demonstrated the required efficiency as military pilots are commissioned second lieutenants in the Air Reserve. They are then assigned to extended active duty with Air Corps tactical units under their status as Reserve officers, provided funds are available for that purpose.

The rivalry between the States of California and Texas in the matter of representation of native sons in the classes undergoing instruction at the Air Corps Training Center still prevails. In this instance, Texas with 21 students takes the lead, followed by California with 19. Los Angeles, as is usually the case, leads the cities represented with five students, the cities of New York, Detroit and Plainview, Texas, being its closest competitors with three each.

A list of the students selected for the March class is given below, as follows:

FLYING CADETS - CIVILIANS

Walter W. Ashworth	Hamilton, Mo.
Arthur W. Ayers	Lebanon, Pa.
Harvey G. Bates	Marietta, S.C.
Dalene E. Bailey	Spokane, Wash.
Willie Barton	Jefferson City, Mo.
William Russell Beemer	Sparks, Nevada
Robert J. Binford, Jr.	Chicago, Ill.
Thomas L. Blalock	Jacksonville, Fla.
Hiram Bower	Carlisle, Pa.
Willard O. Bowman	Berea, Ky.
Glenn E. Brass	Oklahoma, Okla.
Lawrence K. Brooks	Clayton, N.Y.
Marion Judd Brown	Nevada, Texas
Willis James Brown	Huston, Idaho
W. Robert Browne	Amarillo, Texas
Bertrand B. Bruce	Los Angeles, Calif.
Henry F. Burns	Utopia, Texas
Virgil Burns	Bloomington, Ind.
Wilbur D. Camp	Arlington, Texas
James Richard Campbell	Ontario, Calif.
Kirker Campbell	Champaign, Ill.
Chester W. Cecil, Jr.	Abilene, Texas
Charles W. Coit, Jr.	Palo Alto, Calif.
Alton Combs	Middletown, Ohio
William Edward Creer	Spanish Forks, Utah
Harold F. Cunningham	Franklin, Pa.
Fred Harmon Daugherty	Dalhart, Texas
Maurice Dale	Minneapolis, Minn.
Byron B. Dees	Amarillo, Texas

Harold E. Eads	Greeley, Colo.
Robert E. Eldridge	Los Angeles, Calif..
Bob L. Farmer	Plainview, Texas
Walter F. Fisher	Beebe, Ark.
Russell LeRoy Flolo	Aberdeen, S.D.
Bernhard G. Fortmann	Pearl River, N.Y.
H. Hoyt Freeman	Hartford, Conn.
John Loren Freund	Washington, D.C.
William P. Friar	Florence, S.C.
George A. Fuller	Muscatine, Iowa
Arthur E. Graham	New York City
Carl William Handy	Associated, Calif.
Bela A. Harcos	Los Angeles, Calif.
John Spencer Hardy	Logansport, La.
Bruce L. Harwood	Claremont, Calif.
Fred A. Hatfield	Crawfordsville, Ind.
Forrest Haworth	Pasadena, Calif.
William L. Hayes, Jr.	Sacramento, Calif.
Howard W. Helfort	Sioux Falls, S.D.
Richard M. Hobbie, Jr.	Montgomery, Ala.
Albert Carl Hubbel	Baltimore, Md.
Charles N. Hulvey, Jr.	University, Va.
Faul Clayton Hutchins	Gilmore City, Iowa
Lowell F. Johnson	Lafayette, Ind.
Robert E. Johnson	Omaha, Neb.
Elvin Carl Johnston	Scranton, Texas
Robert L. Johnston	Bellevue, Pa.
Roy A. Kamb	Mount Vernon, Wash.
Dennis William Keef	New Plymouth, Idaho
Ralph M. Kellogg	Dover, Mass.
Milton C. Keene	Pinckneyville, Ill.
J. Williams Koett	Pittsburgh, Pa.
Charles W. Kyle	Cedarville, Ohio
Charles C. Lancaster, Jr.	Lexington, Ky.
Alfred B. Lathrop	Pasadena, Calif.
Burton D. Lee	Nixon, Texas
Albert W. Lombardini	Detroit, Mich.
Roy M. Long	Hartshorne, Okla.
Clarence K. Longacre	Williamsport, Pa.
Angus MacLachlen	New York City
Remus G. McAllister	Glendale, Ariz.
John J. McCarthy, Jr.	Ogallala, Neb.
William L. McCracken	Osceola, Iowa
George E. McCauley	Los Angeles, Calif.
John J. McIntosh	Carlisle, Pa.
Ronald Curtis Macy	Little Rock, Ark.
Clifford D. Maddox	San Diego, Calif.
George Walter Malagarie	Broussard, La.
Robert Anderson Mann	New Market, Ala.
Charles M. Marion	Detroit, Mich.
Francis J. Martin	Ottumwa, Iowa
Herbert C. Meade	Los Angeles, Calif.
Richard F. Mertin	Multnomah, Oregon
Charles G. Miller, Jr.	University City, Mo.
George E. Mullin	Wollaston, Mass.
Robert Sims Munford	Waynesboro, La.
Max Nail	Memphis, Texas
John I. Norris	St. Joseph, Mo.
Fred C. Norton	Bandon, Oregon
Jack Hay Oldham	Kansas City, Mo.
Robert L. Olinger	Angola, Ind.
Patrick C. O'Reilly	Eufaula, Okla.
Jarvis D. Farsley	London, Ky.
Elbert Peelle	Whittier, Calif.
Carl L. Peterson	Austin, Texas
Francis Milton Peterson	Newton, Utah
Ernest Q. Petrey	Knoxville, Tenn.
Kenneth Pietch	Amherst, Ohio
Richard E. Purdy	Meeteetse, Wyoming
Simpson D. Puttler	San Francisco, Calif
Claude B. Quillian, Jr.	Ocala, Fla.
Chris H.W. Rueter	Waco, Texas

FLYING CADETS - CIVILIANS (Continued)

Harold S. Rumel	Salt Lake City, Utah	Sanford W. Stuck	Kansas City, Mo.
Robert W. Ryder	Minneapolis, Minn.	Russell T. Sutherland	Champaign, Ill.
Philip M. Salaff	Brooklyn, N.Y.	Terry G. Talkington	Crystal Springs, Miss.
Herbert D. Schultz, Jr.	Alameda, Calif.	David Duval Thomas	Detroit, Mich.
Joseph Selliken	Grafton, N.D.	Joseph H. Tomlinson	El Paso, Texas
Robert Curtis Sexton	Los Cruces, New Mexico	James L. Trew	San Diego, Calif.
Maurice Shannon	College Station, Texas	Audrin R. Walker	University, Ala.
Thomas J. Shelton, Jr.	Plainview, Texas	Dwane Leon Wallace	Wichita, Kansas
Nathan Silversmith	Brooklyn, N.Y.	Beverley Howard Warren	Plainview, Texas
Paul H. Sommers	St. Louis, Mo.	Joseph Welden Westbrook	Brownsville, Texas
Keith Spratt	Fairfield, Iowa	Orville H. Whiteneck	Aline, Okla.
Kermit D. Stevens	Portland, Oregon	Robert Carroll Wood	Haynesville, La.
Marvin Stevenson	Lisco, Neb.	Morris Wuerpel	Kingston, Mass.
Sam B. Stewart	Austin, Texas	Edward E. Yetty, Jr.	Hutchinson, Kansas.
James C. Stormont	Xenia, Ohio		

FLYING CADETS -- ENLISTED MEN, AIR CORPS Privates

Harry J. Address, Jr.	72nd Bombardment Squadron, Luke Field, T.H. (Albany, N.Y.)
Macon B. Andrews	58th Service Squadron, Langley Field, Va. (Monroe, Va.)
Robert Francis Burnham	1st Pursuit Group, Selfridge Field, Mich. (Battle Creek, Mich.)
Ralph C. Burholt, 7th	65th Service Squadron, Luke Field, T.G. (Port Clinton, Ohio)
Ira Lee Ellison	Hqrs. Advanced Flying School, Kelly Field, Tex. (Atkins, Ark.)
George M. Eastham, Jr.	Air Corps Detachment, Ft. Leavenworth, Kans. (Lincoln, Neb.)
Wolcott A. Fariss	46th School Squadron, Randolph Field, Texas (Sacramento, Calif.)
Jesse A. Hays	20th Bombardment Squadron, Langley Field, Va. (Acme, Va.)
James R. Howerton	79th Pursuit Squadron, Barksdale Field, La. (Pauls Valley, Okla.)
Strubbe McConnell, Jr.	79th Pursuit Squadron, Barksdale Field, La. (Shreveport, La.)
James H. McDonald	46th School Squadron, Randolph Field, Texas. (Wolfe, Texas)
Charlie McNew	73rd Pursuit Squadron, March Field, Calif. (Eldo, Okla.)
John T. Marshall	Hqrs. Squadron, GHQ Air Force, Bolling Field, D.C. (Kansas City, Kan.)
Roger M. Roberts, Jr.	95th Pursuit Squadron, March Field, Calif. (Menlo Park, Calif.)
William R. Ward	65th Service Squadron, Nichols Field, P.I. (Pittsburgh, Pa.)
John Doyle Whitt	53rd School Squadron, Randolph Field, Texas (Austin, Texas)

FLYING CADETS - ENLISTED MEN, OTHER BRANCHES OF SERVICE Privates

Laurence Eugene Avery	Hqrs. Battery, 64th Coast Art., Ft. Shafter, T.H. (Bangor, Maine)
Clarence E. Jack, Jr.	Medical Dept., Fitzsimons Gen. Hosp., Denver, Colo. (Newburgh, N.Y.)
Elbert D. Reynolds	Battery B, 15th Field Art., Ft. Sam Houston, Tex. (Beaumont, Tex.)
Earl Willoughby	Battery A, 82d Field Art. Fort Bliss, Texas (El Centro, Calif.)

---oOo---

BILL PROPOSES REHABILITATION OF CHAPMAN FIELD

Under a Bill (H.R. 4131), introduced in the House of Representatives by Hon. J. Mark Wilcox, M.C., of Florida, a sum not to exceed \$6,556,500 is authorized to be appropriated, to be expended for the construction and installation at Chapman Field, Miami, Fla., of such buildings and utilities and appurtenances thereto as may be necessary, as follows:

Radio station	\$18,000
Officers' quarters	2,550,000
Barracks	1,300,000
Noncommissioned officers' quarters	1,468,200
Fire and guard	50,000
Hospital and detachment barrack	160,000
Post Exchange	55,000
Railroad spur	20,000
Incinerator	10,000
Quartermaster maintenance	30,000
Theater and gymnasium	100,000
Sewage disposal	50,000
Enlisted men's service club	53,000
Officers' mess	75,000

Laundry	\$70,000
Garage	40,000
Boathouse	40,000
Bakery	15,000
Water system	75,000
Magazines	24,000
School for children	45,000
Reservation fence	15,000
Street lighting	25,000
Roads	100,000
Telephone construction	68,300
Quartermaster warehouse	65,000
Ordnance warehouse	30,000

The Secretary of War is authorized, when directed by the President, to accept in behalf of the United States, free of encumbrances and without cost to the United States; the title in fee simple to such land as he may deem necessary or desirable in the vicinity of Miami, Fla., as a site for such increases in the aviation field and /or the building area as he may deem necessary.

Under Section 2 of the Bill, there is au-
V-6718, A.C.

thorized to be appropriated not to exceed \$4,758,000, to be expended for the construction and installation at Chapman Field of such technical buildings and utilities and appurtenances thereto as may be necessary, as follows:

Improvement to landing field and building area	\$1,750,000
Runways	100,000
Hangars	2,200,000
Air Corps Warehouse	80,000
Headquarters and operations building	83,000
Parachute building	30,000
Gasoline storage and distribution	55,000
Paint, oil and dope storage	25,000
Field shops	250,000
Paved aprons	100,000
Photo building	50,000
Camera obscura	5,000
Night lighting	25,000
Machine-gun butts	5,000

---oOo---

BILL PROPOSES CREATION OF AN AIR RESERVE

The creation of an Air Reserve, for the purpose of promoting the national air defense, is proposed in a Bill (H.R. 4348) introduced in the House of Representatives by the Hon. John J. McSwain, M.C.

Section 1 of the Bill outlines a declaration of policy, as follows:

"It is hereby declared to be the policy of Congress to make adequate provision for the Air Reserve that it may be immediately available for effective use as a supplement to the Air Corps should national emergency demand."

In the creation of the Air Reserve, the Bill provides that it shall consist of all Reserve officers now holding commissions in the Air Reserve and who hold an aeronautical rating recognized by the War Department, and all who may hereafter be appointed in the Air Reserve under regulations now existing or hereafter issued by competent authority.

The Air Reserve, to be administered as a separate department of the Air Corps, will be under the charge of a Reserve officer, to be known as the Chief of Air Reserve. He shall be appointed by the President and serve for a term of four years unless sooner relieved. He shall serve under the Chief of the Air Corps, and during such service shall hold the temporary rank of field grade in the Air Reserve on active duty, being entitled to the same pay, allowances and flying privileges as such officer in the Air Corps.

Pending appropriations by Congress, the cost of activities of the Air Reserve shall be paid from funds heretofore appropriated for the Air Corps Reserve.

The Chief of Air Corps shall furnish the Chief of Air Reserve such assistants from the regular personnel of the Air Corps, or from civilian employees under his jurisdiction, as may be necessary to effectuate the purposes of this Act.

The duty of the Chief of Air Reserve will be to formulate plans for the supply and training of the Air Reserve, including the provi-

sion of airplanes and aeronautical equipment suitable for the training of the Air Reserve; to foster the establishment of suitable air-dromes for use of the Air Reserve; to organize the Air Reserve into tactical and administrative units; to prepare regulations for appointments and promotions in the Air Reserve and to prepare estimates of appropriations necessary to provide facilities, equipment, supplies, and training for the Air Reserve, for submission through appropriate channels to Congress.

Qualified Air Reserve pilots shall be eligible to make practice flights at any air-drome of the Air Corps or Air Reserve under such regulations as the Chief of Air Reserve may promulgate with the approval of the Chief of Air Corps. Provision shall be made for flying practice of not less than six hours per month for any qualified Air Reserve pilot applying therefor.

For injuries sustained in practice flights the Air Reserve pilots shall be entitled to the same pay, hospitalization, medical, or other benefits as allowed pilots of the Air Corps for injuries sustained in line of duty. In the event of death from injuries sustained in practice flights, the dependents of the deceased Air Reserve pilot shall be entitled to the same burial, indemnity, or other benefits as allowed dependents of Air Corps pilots fatally injured in line of duty.

Provisions shall be made to order all Air Reserve pilots who may apply therefor, on such terms as the Chief of Air Reserve may designate, with approval of Chief of Air Corps, to periods of active duty from time to time, which periods of active duty shall embrace intensive instruction in latest Air Corps developments, to the end that Air Reserve pilots may be kept informed of military aeronautical progress.

---oOo---

RADIO EQUIPMENT FOR AIRPLANES

The policy of the Chief of the Air Corps pertaining to radio equipment for various types of airplanes will no doubt be of general interest to the Air Corps. This policy in general provides for airplanes to be equipped as follows:

Bombardment; Observation, Long Range; and Cargo - Command Set, Long Range Liaison Set, Radio Compass, Instrument landing equipment and Interphone.

Attack - Complete Command Set, Radio Compass, Instrument landing equipment and Interphone.

Observation, Corps and Army - Short Range Liaison, Radio Compass, Instrument Landing equipment and Interphone.

Pursuit - Command set.

Basic Training - Command Set, Radio Compass, Instrument landing equipment and Interphone.

The consummation of this plan depends, of course, upon funds made available. Funds are included in the Budget estimates for the Fiscal Year 1936.

ENLISTED PILOTS OF THE AIR CORPS

The Air Corps at the present time numbers among its piloting personnel 60 enlisted men who hold flying ratings in the Regular Army, 54 being Airplane Pilots and 6 Airship pilots and Balloon Observers. Included among these 60 enlisted pilots are 17 Master Sergeants, 3 Technical Sergeants, 13 Staff Sergeants, 8 Sergeants, 2 Corporals, 9 Privates, 1st Class, and 8 Privates.

The 6 Airship Pilots and Balloon Observers are:

Mr. Sgt. Albert C. Gamble	Ft. Bragg, N.C.
Mr. Sgt. Arvin E. Miller	Langley Field, Va.
Mr. Sgt. Ronald H. Short	Langley Field, Va.
Mr. Sgt. Olin Brown	Scott Field, Ill.
Sgt. Harrison C. Finley	Scott Field, Ill.
Staff Sgt. Joseph F. Murray	Fort Sill, Okla.

The 54 Airplane Pilots are enumerated below, as follows:

Master Sergeants

Stewart C. Smink	Aberdeen, Md.
*Samuel J. Davis	Barksdale Field, La.
John L. Waugh	Barksdale Field, La.
Carlton P. Smith	Brooks Field, Texas
*Chester F. Colby	Chanute Field, Ill.
*Cecil B. Guile	Fairfield A.D., Ohio
*Peter Biesiot	Kelly Field, Texas
Raymond Stockwell	Fort Lewis, Wash.
Boyd R. Ertwine	March Field, Calif.
Julius A. Kolb	Panama Canal Zone
*James A. Lee	Philippines
Ezra F. Nendell	Randolph Field, Tex.
Bernard Wallace	Randolph Field, Tex.

Technical Sergeants

Frank J. Siebenaler	Selfridge Field,
Faul B. Jackson	Panama Canal Zone
Douglas M. Swisher	Panama Canal Zone

Staff Sergeants

Paul S. Blair	Brooks Field, Texas
Julian M. Joplin	Chanute Field, Ill.
Tracy K. Dorsett	Duncan Field, Texas
Opal E. Henderson	Duncan Field, Texas
Maurice M. Beach	Hawaiian Department
Jerome B. McCauley	Hawaiian Department
Fred O. Tyler	Langley Field, Va.
Ray W. Clifton	Maxwell Field, Ala.
John H. Williamson	Maxwell Field, Ala.
Thomas W. Rafferty	Randolph Field, Tex.
Arthur Hanson	Rockwell Field, Cal.
Gilbert E. Layman	Mitchel Field, N.Y.

Sergeants

Loren Cornell	Ft. Crockett, Texas
*John H. Price	Duncan Field, Texas
Charles C. Cunningham	Hawaiian Department
Randolph L. Wood	Langley Field, Va.
William C. McDonald	Maxwell Field, Ala.
Frederick H. Wilson	Panama Canal Zone
*George H. Holmes	Randolph Field, Tex.

Corporals

John D. Pitman	Barksdale Field, La.
Daniel I. Moler	Middletown A.D., Pa.

Privates, 1st Class

Noel F. Parrish	Fairfield A.D., Ohio
Cornelius K. Dunbar	March Field, Calif.
Lloyd L. Sailor	March Field, Calif.
Robert S. Angle	Philippines
Henry O. Bordelon	Randolph Field, Tex.
Thomas S. Davis	Randolph Field, Tex.
Marvin F. Stalder	Rockwell Field, Cal.
Arnold T. Johnson	Scott Field, Ill.

Privates

Vernet V. Poupitch	Brooks Field, Texas
Hamish McLelland	Aberdeen, Md.
Lawrence O. Brown	Fairfield A.D., Ohio
Vernon M. Byrne	Hamilton Field, Calif.
Russell L. Waldron	Maxwell Field, Ala.
Harry Coursey,	Middletown A.D., Pa.
John Gebelin, Jr.	Randolph Field, Texas
Edgar R. Camp	Randolph Field, Texas

Addendum - Private, 1st Class

James M. Treweek	Fairfield A.D., Ohio.
------------------	-----------------------

*Completed flying training prior to 1921

Four of the enlisted men listed above are members of the famed mythical Caterpillar Club, namely, Technical Sergeants Siebenaler, Swisher, Privates Gebelin and Treweek. The last named is a second degree member.

---oOo---

SIGNAL CORPS RADIO REPAIR SECTIONS

With the purpose in view of securing maximum service from Signal Corps aircraft radio equipment, to insure that such equipment is in first class operating condition prior to the delivery of reconditioned airplanes to tactical organizations, and in general to assist in the maintenance of Signal Corps radio equipment pertaining solely to the Air Corps, Signal Corps Radio Repair Sections have been established at the Middletown, Fairfield, San Antonio and Rockwell Air Depots. These sections are an integral part of these Depots and function under the Depot Engineering Officers.

The officer in immediate charge of the Section will normally be a Signal Corps officer assigned to that specific duty by War Department orders.

Circular No. 1-8, issued by the War Department, Office of the Chief Signal Officer, January 10, 1935, prescribes that radio equipment received at Signal Corps radio stations will be installed, tested in flight if necessary, and removed from airplanes by Air Corps personnel. Radio equipment requiring only minor repairs which cannot be satisfactorily and economically performed locally will be shipped by airplane transportation to the Signal Corps property officer of the Signal Corps Radio Section serving the control area in which the property is located. The equipment will be tested, adjusted, calibrated, repaired or replaced, as may be required by conditions and circumstances.

The work performed by Signal Corps Radio Sections will be in strict conformity with specifications and instructions issued by the Signal Corps Aircraft Radio Laboratory and/or the Materiel Division of the Air Corps governing the particular equipment undergoing repair or alteration.

The repair of aircraft radio equipment belonging to the National Guard or to the Organized Reserves will be handled in the same manner as that belonging to the Regular Army.

The Circular above referred to prescribes the method of disposing of equipment requiring repairs by major disassembly or rebuilding, the invoicing of unserviceable equipment, the storage of equipment, the preparation of re-

V-6718, A.C.

quisitions therefor, the keeping of records, the rendition of reports and the maintenance of property accounts.

Recommendations have been made by the Chief of the Air Corps to extend the Signal Corps Radio Repair Service by establishing similar sections at the Air Depots in Hawaii, Panama and the Philippine Islands.

---oOo---

COL. ANDREWS ADDRESSES WOMEN PATRIOTIC ORDERS

With the new air program of the Army as his theme, Lieut.-Colonel Frank M. Andrews, Air Corps, Commander of the General Headquarters Air Force, in an address before the Women's Patriotic Conference on National Defense, held in Washington, January 31st, stated that he knew of no subject which at present is of greater importance from a national defense viewpoint than air power, and that the constantly increasing range of action and striking power of the airplane insures for it a rapidly and continually increasing importance in our scheme of national defense.

Touching upon the conception held by many that the next war will see the destruction of great cities by sudden attacks from the air, using both explosive and poison gas bombs, Col. Andrews stated that in Europe, where the countries are small, densely populated and border upon or are very near each other, the fear of such operations is great. Large scale air bombardment has never had the test of war, and no one can now accurately predict its ultimate effect. We do know, however, that it produces a terrific psychological effect as well as enormous material destruction. It may be that in war of the distant future, air attack on a large scale will alone suffice to subdue even a major power. Whether or not the United States would sue for peace because of air attack alone, such attacks against our vital areas would be a major catastrophe, and we must be prepared to prevent them. An adequate air force of our own is the only agency which can meet effectively a threat from the air.

Asserting that the War Department, after a very careful study of the various phases entering into an attack from the air against the United States by possible enemy nations, taking into consideration the strength of their air organization, the characteristics of their aircraft at present and of those to be developed in the immediate future, the conclusion was reached that only by basing aviation upon ships or upon territory near our own could an enemy make such attacks upon us. After full consideration of the strength of our Naval aviation, of the possibilities of the aircraft carriers of the world powers, and of other ships which might be used as floating airplane bases; and after consideration of land areas near our borders which might under any reasonable estimate be made available for air bases, the War Department decided upon the strength and character of military aviation we should have to prevent the development of any situation which would produce a real threat.

This airplane strength, submitted to the President, received his approval, subject to the availability of funds to purchase the air-

President, received his approval, subject to the availability of funds to purchase the aircraft and to procure the personnel.

The War Department study divides our Army aviation on the assumption of a total of 2320 airplanes into a General Headquarters Air Force, to consist of approximately 1,000 tactical airplanes, the bulk being of the combat type, bombardment, attack and pursuit, with some long range observation; also airplanes sufficient for the defense of our overseas possessions, principally of combat type; Observation airplanes to accompany the corps and armies, and Training and Transport airplanes for use in rear areas.

Characterizing the General Headquarters Air Force as the great striking element of our military aviation, Colonel Andrews concluded his address with the statement that we expect this air force to attack any enemy approaching our coasts if the fleet cannot, for any reason, operate in that area in sufficient strength to cope with the situation alone. We expect the General Headquarters Air Force to attack such enemy ground installations as he may try to establish near enough to our borders to attack us. We believe this air force will have a tremendous influence in preventing the effective development of any type of hostile attack within its range of operation.

---oOo---

REPORT OF FEDERAL AVIATION COMMISSION

The President of the United States submitted to Congress on January 31st a report of the Federal Aviation Commission which carries various recommendations for permanent Federal aviation policies.

The recommendations of the Commission with respect to the Army Air Corps are quoted below, as follows:

40. The modification in air force organization now being put into effect should be continued until the merits or otherwise shall have been proven by experience. The employment of air force as an independent striking unit should continue under constant study, both in the Army and in the Navy, and should be developed to its limit by tactical maneuvers and through the procurement of material best suited to such independent operations.

41. The personnel and equipment of the air forces should be further developed, and where necessary expanded, in accordance with fixed programs of regular growth based upon the current plans of the Army and Navy. The effectiveness of the forces should be kept at the highest pitch by constant attention to superior quality of equipment and of personnel, and by the conduct of training exercises under widely diversified climatic and geographical conditions offering the greatest possible variety of operating problems.

42. Intense study and prompt remedy should be given to the inter-relationship of the national defense Services.

43. The budgetary practices of the Army and Navy in respect of aeronautical matters should be standardized for easy comparison. In both Services the funds for equipment

V-6718, A.C.

to be used on aircraft should be directly allocated to the authorities in charge of aeronautical development, and subsequently transferred to other branches or offices if necessary.

44. A number of officer pilots of the Regular Army and Navy should be assigned annually to the other Service, and given duty with other active air units.

45. The experimental and development work of the Army and Navy should be carried on on an increased scale. The funds provided for such work should be materially increased, as the necessary consequence of the increasing complexity of aircraft and engine construction. Special allocations should be made by both Services for a particularly vigorous developmental campaign on high-powered and highly supercharged engines, and on power-plants of diesel type.

46. Funds appropriated for experimental purposes and not paid out when expected because of a failure of an article to meet the contractors guarantees or a failure of any contractor to come forward with an article meeting a Service specification under which funds had been set aside, should remain available until used.

47. There should be a closer coordination of Army and Navy experimental and developmental work, and the National Advisory Committee for Aeronautics should be more largely used as an agency for such coordination. A much higher degree of uniformity than now exists should be attained in auxiliary material and the methods for its development, and also in the practices of the Army and Navy in such technical matters as the analyzing of aircraft for strength, testing for performance, and so on.

48. Arrangements should be made for the temporary attachment of a few officers of the Army and of the Navy to civil activities, and especially to air transport, for study in order that the armed Services may secure the greatest benefit from civil aeronautical experience.

49. The War and Navy Departments should adopt the practice, where possible without increase of cost to the government, of making reasonable use of the facilities of approved civil aircraft repair stations for repair and service work on military and naval aircraft.

50. There should be immediate and positive action to improve the promotion situation in the Army, with special reference to the Air Corps. The authority to provide temporary rank in the Air Corps, to make the rank commensurate with the responsibilities held, should be broadened and then used.

51. The authority to select a Chief of Air Corps from among all the officers of long service in that arm, which has now expired, should be renewed.

52. The maximum term of active service with regular forces on the part of Reserve pilots graduated from the Army and Navy training schools should be increased, at least to three years and perhaps further. A cash payment should be given upon termination of this duty to ease the shock of transference to civil life.

53. Cadets accepted for training in either the Army or Navy flying schools should be required to take a definite obligation to perform a definite period of active duty after graduation, except as their resignations may be ac-

cepted in the discretion of the War or Navy Departments.

54. The aviation Reserves both of the Army and Navy should be materially strengthened, and should receive a higher priority than they at present enjoy in the allotment of funds. Consideration should be given to the establishment of Assistant Secretaries of War and of the Navy for Reserve or personnel matters. Their duties would include the encouragement and maintenance of a more effective Reserve force in both Services, particularly with regard to the fields requiring a specialized combination of technical ability and military training.

55. The Army and Navy should organize special classifications in the Reserve for essential personnel of air line organizations, and every effort should be made to secure the enrollment of such personnel in one or the other of the Reserve forces.

56. The War and Navy Departments should give serious study to measures of securing a general enrollment in some category of the Reserve of private pilots and commercial pilots other than those employed in air transport, to the maintenance of an appropriate check on the individual qualifications of civil pilots, and to the establishment of special training courses to supply highly trained civil pilots with such specifically military training as might be necessary to make them immediately effective members of a reserve.

57. There should be created a new type of government insurance for Reserve officers, covering the aviation hazard exclusively, available in amounts substantially beyond the present \$10,000 limitation, and with premiums arbitrarily maintained on a very moderate scale. The personnel of the aviation Reserves should receive the same protection in case of injury or death in line of duty as would be given to Regular officers under the same circumstances.

58. The provision for officer personnel of special engineering ability and industrial experience in the aviation field should be reconsidered both by the Army and by the Navy. An adequate number of such officers should be developed and given assurance by legislation of attractive careers in the Service. In the case of the Navy at least, we recommend the commission of such officers in a staff corps to insure continuous employment on duties connected with their specialty.

With respect to the procurement of military and naval aeronautical material, the Commission recommends that explicit authority should be granted to the Secretaries of War and Navy to negotiate contracts for quantity purchase of aircraft and other aeronautical material, full report thereof being made to Congress in each case.

Further extracts from the report of the Federal Aviation Commission will be given in the next issue of the News Letter.

NOTES FROM AIR CORPS FIELDS

Hamilton Field, San Rafael, Calif., Jan. 18.

Group training schedules emphasize ground training. This is due to the fact that only nine Bombers are at this station and they must be sent to Rockwell Field for the installation of controllable pitch propellers, before they can be used. The other planes here at this time are 12 PT-3A's (4 to each squadron), 1 BT-2A (Hqrs. Flight) and 1 C-14 (Hqrs. Flt.) Hence the flying training now consists only of individual proficiency flights with an occasional avigation flight. This Group now has 27 Bombers, four of which will soon be flown to Selfridge Field for cold weather tests.

Two of the Bombers at Rockwell Field were badly damaged when Cadets Edward W. Virgin and Alexander W. Bryant nosed over after landing.

It is expected that our Bombers will be ready for flight by March 1st, except for those four used on the special project by the Chief of the Air Corps.

Captain Junius F. Smith, Medical Corps, has been assigned to this station.

Officers recently reporting to this station were assigned as follows: 2nd Lieut. Richard T. King and 2nd Lieut. Allen L. Erickson (Air Reserve) to the 9th Bombardment Squadron.

Major C.L. Tinker, Commanding Officer, has designated Major Fabian L. Pratt, M.C.; 1st Lieuts. James W. Spry, Engineering Officer; and John G. Moore, Operations Officer, as the Aircraft Classification Committee for this station.

The Secretary-Treasurer of the Officers' Club is 2nd Lieut. Roy H. Lynn.

Capt. Devereux M. Myers has taken up a new game here which he calls Badminton. The idea, according to the captain, is to knock a shuttlecock back and forth over a net with a small racket.

The Public Relations Officer, 2nd Lieut. Eugene H. Beebe, and the Provost Marshall, Police and Prison Officer, 1st Lt. Walter R. Agee, have as their assistants, 2nd Lieuts. James E. Roberts and Joel L. Crouch, Air Reserve, respectively.

120th Observation Squadron, Colorado N.G.

At present we are taking delivery of 8 O-19E airplanes from the Regular Army through the San Antonio Air Depot. Four planes were received to date, and Lowry Field personnel are highly pleased with their performance.

Two of our O-38's were ferried to the S.A.A.D. for overhaul and will be assigned to the Arkansas National Guard. One O-38 and one O-38E will be turned over to the Minnesota and Missouri National Guard, respectively.

Four new men were commissioned in our Squadron recently, viz: 2nd Lieuts. Baxter L. Ireland, Eugene Cunningham, Daniel F. Burns and William C. Calhoun. The Squadron now has a total of 20 officers..

Fort Crockett, Texas, January 17th.

Six Air Reserve officers were assigned to and joined the Third Attack Group for a six

months' tour of extended active duty beginning the first of the year, viz: 2nd Lieuts. C.C. Harris, Jr., of Galveston, Texas; C.O. Miller, Connorsville, Ind.; S.V. Payne, Fannin, Texas; E.V. Robnett, Jr., San Antonio, Texas; Clayton Stiles, Chicago, Ill. and W.E. Waters, Millen, Ga.

Air Corps Tactical School, Maxwell Field.

The Commandant, officers and men of Maxwell Field were hosts to the City of Montgomery on Monday evening, Jan. 14th, on the occasion of the Governor's ball, celebrating the inauguration of Governor Bibb Graves into office. Some 5,000 people from Montgomery and surrounding cities were present for the grand march at 9:00 p.m. The scene of the ball was Hangar No. 4, which was beautifully decorated with flags and bunting for the occasion. Flags of the United States and of other nations, also the flag of Alabama surrounded the Governor's box. Uniforms of the Army and Navy appeared mixed in with the crowd and a brilliant and successful evening was enjoyed.

Arrangements were made for the President's ball to be held in the same hangar on Jan. 30th, a large crowd being expected.

Two airplane accidents within the last two months saddened the personnel at the Tactical School. The first occurred on December 11th, when Capt. A.B. Ballard, A.C., and 1st Lieut. Ricardo Castenada Leon, Mexican Air Force, collided in the air, the planes crashing and killing both pilots. The Commandant of the School, Lieut.-Colonel John F. Curry, with Majors Wm. O. Ryan, A.C., and Thomas L. Gore, M.C., Capt. Melvin B. Asp, Warren R. Carter and Kenneth C. McGregor accompanied the body of Lieut. Leon to Mexico City as escort of honor.

The second accident occurred on January 7th, when 1st Lt. James L. Majors was returning from Aliceville, Ala., after ferrying to that town on an errand of mercy a soldier from the field whose father was ill. On the return trip, bad weather and fog apparently blotted out all visibility, and the pilot crashed 10 miles short of the field and was instantly killed.

The instructors and students returned on January 2nd after a well deserved holiday vacation and are hard at work again. The School is in its 20th week, and the subject now being studied is Attack Aviation.

New arrivals at Maxwell Field were Major Raymond E. O'Neill, who was assigned as Instructor at the School in Balloons and Airships; Capt. William H. Lawton, M.C., a recent graduate of the Flight Surgeon's School at Randolph Field, Texas, who was assigned as Assistant Flight Surgeon; 1st Lieut. Ralph A. Smavely, from March Field, Calif., assigned as Asst. Post Operations Officer and C.O., Ordnance Detachment.

Major Guy D. Griggs, M.C., absent at the Army and Navy General Hospital at Hot Springs, Ark., for the past several months, V-6718, A.C.

has been retired according to recent notification from the War Department.

Capt. Wm. H. Powell, M.C., is on D.S. at Randolph Field, pursuing the course at the Flight Surgeon's School.

Major Wm. O. Ryan was relieved as Post Executive Officer and detailed to the Air Corps Board. He and Lieut. Gordon P. Saville, who was relieved as Instructor, are the only officers so far appointed to the Board.

Tech. Sgt. Henry M. Ruhs was transferred from Kelly Field to Hqrs. of the School.

Staff Sgt. Donald Williams, promoted 1st Sgt., was relieved as NCO in charge of Reproduction at the School, and assigned to Hqrs., his former position being taken over by Staff Sgt. James Robinson.

Warrant Officer Perry B. Jackson departed from this station and will be replaced by Warrant Officer Chester, now absent sick in Letterman General Hospital.

The Basketball season will officially open early in February. Uniforms and equipment are on hand and the squadron teams are busily at practice for what appears to be the largest basketball year seen at the field so far. The four teams at the field are the 51st and 54th School Squadrons, Headquarters of the School, and the "Spare Parts Team," composed of all detachments.

The 54th acquired several new players since last year and promises to furnish plenty of competition. It will be coached by Staff Sgt. Stephen P. Riales, assisted by Sam Nelms, former Hawaiian Department Champion. They promise a real team.

First Lieut. Frank F. Everest, Jr., Athletic Officer, has equipped Hangar No. 6 as a first class gymnasium, and as soon as the backstops are padded, a perfect basketball floor will be ready for the Inter-Squadron games. With the snappy new uniforms and the excellent squadron spirit displayed by all the organizations for sports here, an interesting season is predicted.

Bolling Field, D.C., January 15th.

The officers of Bolling Field, with very much regret, bade good-bye to Lieut.-Colonel H.C. Kress Muhlenberg on January 14th, when he left for his new assignment as Air Officer, Headquarters 3rd Corps Area. Colonel Muhlenberg had been our Commanding Officer only since June 13th last, but he and Mrs. Muhlenberg, through their personality, interest in the work and pastimes of both officers and enlisted men and their cordiality with all with whom they came in contact, had won a very warm spot in the hearts of the personnel of this command. His many friends are very glad that his new assignment does not take him very far away.

The officers and ladies of Bolling Field gave a farewell dinner to Colonel and Mrs. Muhlenberg on January 10th at the Officers' Club. The Reserve Officers of the District of Columbia gave a dinner to Colonel Muhlenberg at the Army-Navy and Marine Country Club on the following day. The Colonel has shown great interest in the training of Reserve Officers since coming to Bolling Field, and this

dinner was a token of their appreciation.

The personnel of the post welcomed Major and Mrs. Martin F. Scanlon and are delighted to have their one time Commanding Officer return to the field for another tour of duty.

SCOTT FIELD CHALLENGES AIR CORPS DISCIPLINARY RECORD

During the thirteen month period from January 1, 1934, to January 31, 1935, Scott Field had two men in its Guard House in January, 1934, only one man in February, and no men in confinement for the ensuing eleven months. During this same 13-month period it had one General Court Martial, one Special Court-Martial and but eleven Summary Courts-Martial trials and convictions.

---oOo---

CAPTAIN BEVERIDGE DIES IN HOSPITAL

The sad news has just reached us that Captain John Beveridge, Jr., Air Corps, died at 12:10 a.m., February 1st, at the Walter Reed General Hospital.

Captain Beveridge had been ill for some months and Medical Officers held no hope for his recovery. He is one of the veteran pilots of the Air Corps, entering the military service during the World War.

He was taken ill while attending the Air Corps Tactical School at Maxwell Field, Ala. and he was immediately transferred to the Walter Reed Hospital.

Prior to being detailed to the Tactical School, Captain Beveridge was on duty as Chief of the Materiel Liaison Section, Office of the Chief of the Air Corps, Washington. He served in that office for a period of four years.

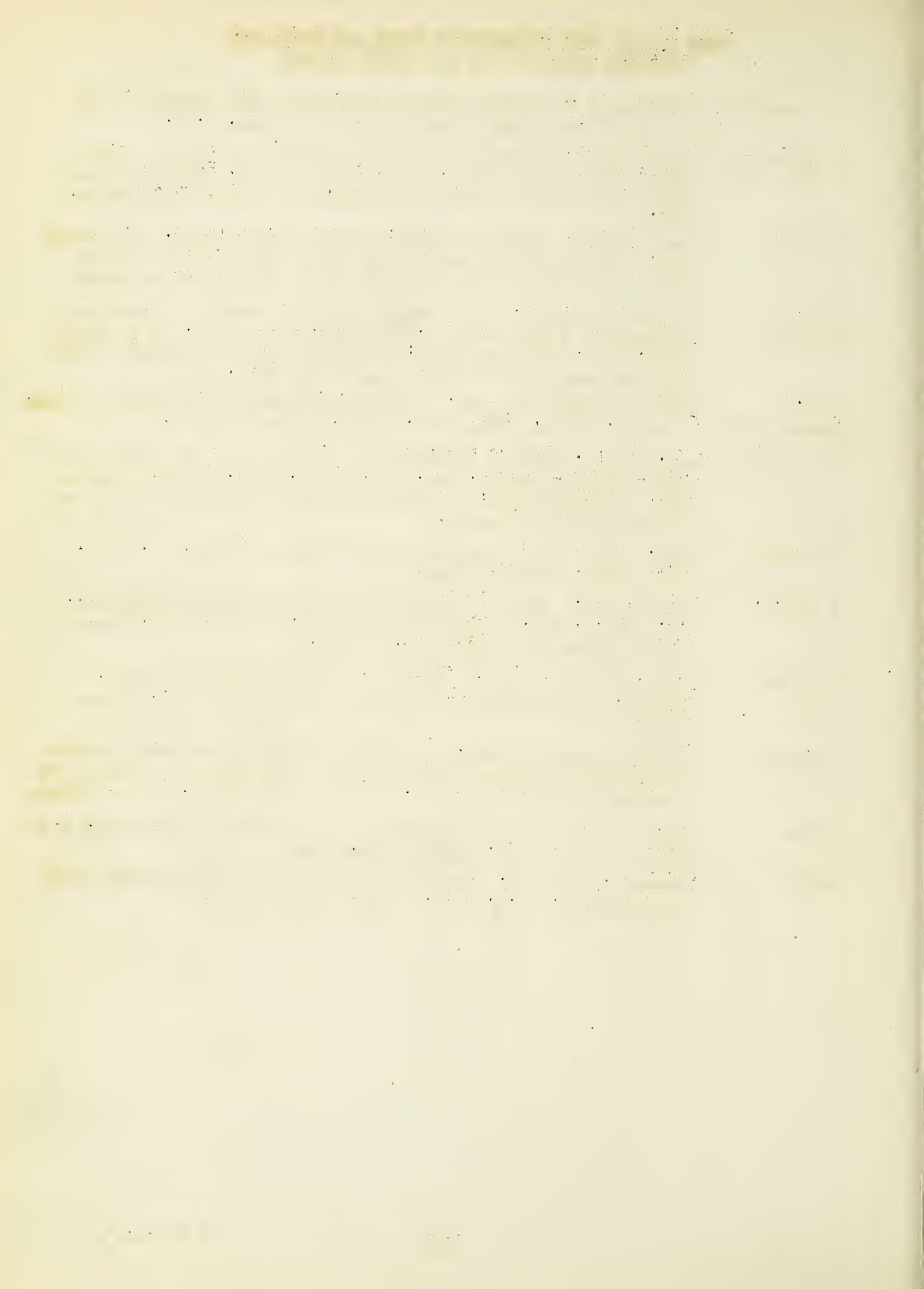
Of a very likeable personality, Captain Beveridge made many friends, and his death is a severe loss to them as well as to the branch of the service which he loved so much.

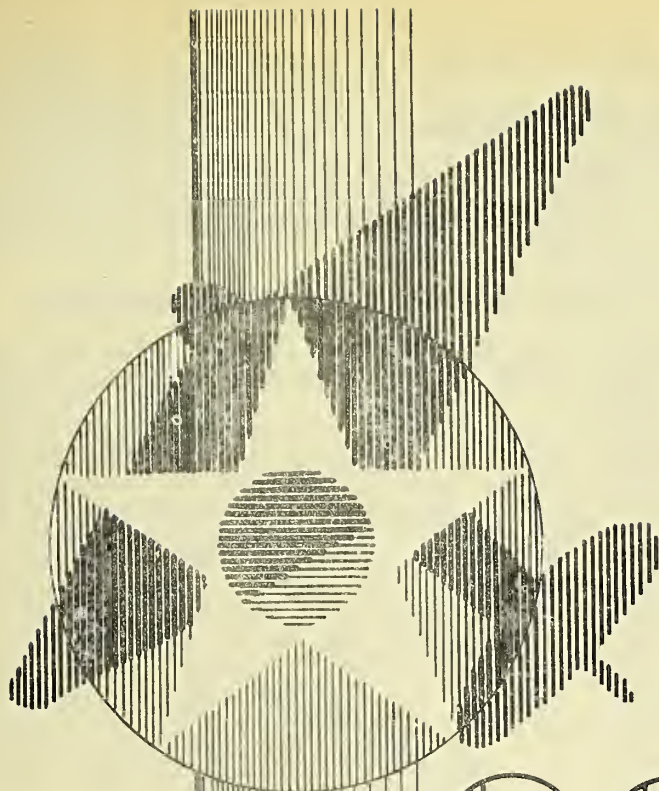
A devoted husband and father, his loss is an unbearable one to those who were so near and dear to him, and the sincere sympathy of the Air Corps is extended to his bereaved family.

SOME OF THE MORE INTERESTING BOOKS AND DOCUMENTS
RECENTLY ADDED TO THE AIR CORPS LIBRARY

Available for loan to Air Corps Organizations only upon request to the
Air Corps Library, Munitions Bldg., Washington, D. C.

- A 10/Russia 24 L'Aviation sovietique au salon de l'aviation a Paris - Grand Palais 1934. 1934. 19p. incl. illus. 24 cm. English title: Soviet aviation at the aviation salon at Paris, Grand Palais, 1934.
- C 70/19 Steed, Wickham. Aerial warfare: secret German plans. Lond. July 1934. Caption title, 15f. 24 $\frac{1}{2}$ cm. Takes up bacteria and gas warfare and the circulation of same in underground railways.
- C 71.6 France/4 La Radio-Industrie. Raid Rossi et Codos; record du monde de distance en ligne droite 9.104 kilom. Paris, 1934. 12 p. incl. illus. 29cm. English Title: Flight of Rossi and Codos; world distance record in straight line 9.104 kilom.
- D 13.3 Gyroscope/5 Sperry gyroscope co., inc. The Sperry pilot for automatic flying. Brooklyn, c1934. 23p. incl. illus. diags. 19 $\frac{1}{2}$ cm.
- D 52.39/121 Levy, Joseph. Notice technique de l'extincteur au bromure de methyle pour aeronefs. 4ed. nd. 25 p. incl. illus. diags. 21cm. English Title: Technical notice of methyl bromide extinguishers for airships.
- D 52.9/15 Vinay, Louis. Les parachutes Louis Vinay. Parid, nd. 46 p. incl. illus. diags. 24 $\frac{1}{2}$ cm.
- F 10/U.S. 39 Foulois, B.D. Army Air Corps depots need modern equipment... N.Y. Jan.2, 1934. caption title, pp.4-7, incl. illus. 30cm. From American Machinist, Jan.2, 1935.
- 629.1344 D91 Duncan, Richard. Stunt flying by Captain Richard Duncan... Chicago, The Goodheart-Willcox co. inc., 1930. 183 p. illus. 20 $\frac{1}{2}$ cm.
- 629.192 Orlebar, Augustus Henry. Schneider trophy; a personal account of high-speed flying & the winning of the Schneider trophy, by Wing-Commander A.H. Orlebar... Lond. 1933. 237 p. illus. 22 $\frac{1}{2}$ cm.
- 92/I43 Hart, Liddell. Colonel Lawrence the man behind the legend. N.Y. 1934. 382 p. incl. illus. maps, 24cm.
- 92/R67 Roosevelt, Theodore. Theodore Roosevelt an autobiography with illustrations. N.Y. 1916. 615p. illus. 20 $\frac{1}{2}$ cm.





AIR CORPS NEWS LETTER

ISSUED BY THE OFFICE OF
THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON D. C.

THE AIR CORPS NEWS LETTER

ISSUED BY THE OFFICE OF
THE CHIEF OF THE AIR CORPS
WASHINGTON, D. C.

The Chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---000---

NATIONAL AIR FRONTIER DEFENSE ASSOCIATION ANNOUNCES ITS POLICY

The following policy was adopted by the National Air Frontier Defense Association:

"To promote interest in and secure Congressional action to bring about the establishment of a system of Air Frontier Defense bases in the United States and Insular possessions and a substantial increase in the Air Force in connection therewith; to leave to the War Department all policies relating to the location of such bases and questions pertaining to their equipment, personnel, training, and operation."

General Charles E. Kilbourne, G.S.C., Assistant Chief of Staff, War Plans Division, and Major Follett Bradley, G.S.C. (A.C.), were present at the initial meeting of the Association in Washington, D.C. The War Department has announced that it is in accord with the above policy of the Association and expects to have an opportunity to show the need for Air Corps permanent stations in addition to those it now has in hearings before the present session of Congress.

General Kilbourne, who several days ago departed for the Philippines to assume his new duties as Commanding General of the Harbor Defenses of Manila and Subic Bays, recently made a statement in an open hearing conducted by the Military Affairs Committee of the House of Representatives, to the effect that what is deemed necessary is to provide in each strategic area the necessary installations for the service of G.H.Q. Air Force units when concentrated in such area for maneuvers. The Air Corps is now, and has been for some time, engaged in a survey of the several strategic areas.

It might be of interest to know the specific purposes of these bases and, briefly, the methods of utilizing them in peace and in war.

First, let it be understood that, while in peace certain specific Air Corps units will be assigned a "permanent station" in each area, actually their occupation of these stations will be permanent only in the sense that they will be located there during such times as they are not engaged, at some other locality, in maneuvers in peace or hostile operations in war. In the event of war, probably not more than a very small number of the permanent stations will be occupied at the same time

by combat units, for it is inconceivable that serious attacks on the United States in force could be launched against several localities simultaneously. The location of the country or countries at war with us will indicate in a general way the most likely theatre or theatres of war and of operations. The threatened sector within those theatres will be determined through various sources - naval and military intelligence, surface ships, and submarines and aircraft. When the theatre is determined, the Air Force will be partially concentrated to protect that theatre. When the specific threat against any sector has been located, the Air Force will be still further concentrated to meet it and will go into action as soon as effective results can be obtained.

It is impossible, and in fact highly undesirable, for each permanent station to be large enough to accommodate the whole Air Force, or even a major portion of it. To attempt such manner of operation would be to place all of one's eggs in one basket, and would render the Air Force concentrated thereon subject to major damage in the event of a successful hostile air attack. On the contrary, each permanent air station will serve as a base or nucleus for the operation of that part of the Air Force deemed necessary to meet the threat against the area served by that permanent station. These military facilities will be augmented by suitable civilian facilities in each area.

The growth of civil aviation, carefully fostered by the Federal, State and local governments, together with the patriotic air-mindedness of local communities, may be expected to supply most of the operating fields which will be necessary in the event of war. However, a necessary step in the provision of adequate air defense is the acquisition and construction of the additional permanent Air Corps stations, and their equipment with the necessary airplanes and personnel. When they are thus garrisoned, the commanding officers of each will be specifically charged with the accurate and detailed determination of the location, size, and numbers of the required civil fields needed in his area to accommodate war operations. For such of these fields as cannot be pre-

pared as indicated above as an incident of commercial air development, suitable sites will be selected and estimates of cost in money and man hours will be prepared and held until war is threatened.

Frequent peace-time maneuvers will be held in the areas served by each permanent Air Corps station to perfect the training of the various units of the Air Force team, and to determine the adequacy and progress of the program to provide the necessary operating fields.

So far, this discussion has been limited to the Air Force alone. However, we must not forget that the Air Force is but one agency of national defense, albeit a most important one. The Navy, the harbor defenses, and the other combat arms and services of the Army are all absolutely essential to adequate defense, and to place entire reliance on any one would be the height of folly. Complete security demands all these agencies. Their places and functions in the national defense scheme may be roughly and briefly visualized as follows:

The primary function of the Navy is to maintain inviolate our vital sea communications and deny them to the enemy. In so doing it may protect the coast indirectly. If the condition and situation of our fleet are such that it can and does operate effectively in any sea area, our coast line covered by that sea area is safe from attack by naval, air or ground forces. However, in view of the fact that the primary mission of the fleet requires that it be free to move and operate in any waters, the incidental protection it may afford a given part of the coast is transient, and therefore cannot be assigned a permanent value in the Army's plan of defense.

The Army is responsible for the direct defense of the coastal and land frontiers. This is necessary in order that the United States Fleet may be free to conform to the movements of its principal objective, which is the hostile fleet. The development of a well-balanced Air Force as a combat arm of the Mobile Army gives to us a powerful element for use in situations wherein the fleet has been unable, for any reason, to prevent the approach of hostile forces to a position from which they can attack. Like the Navy, the Air Force must be ready to operate immediately on outbreak of war and can strike powerful blows against the enemy while the latter is still beyond the sphere of action of the harbor defenses and the field armies. In certain situations the Air Force may afford direct support to the fleet.

In the Army's defense of the coast the G.H.Q. Air Force affords a long-range, highly mobile striking force, and the ground troops a line of resistance in

which the harbor defenses constitute "strong points." It is by means of all three of these agencies that the Army provides for the accomplishment of its responsibility for the direct defense of the coast.

---oOo---

PROMOTIONS AND CHANGES OF STATION OF AIR CORPS OFFICERS

The temporary promotion of Air Corps officers in order to give them suitable rank commensurate with the duties which they are performing is now under the process of being accomplished.

This matter of insufficient rank of Air Corps officers for duties performed by them is one which has been in debate for quite a number of years. The Morrow Board in 1925, cognizant of this situation in the Air Corps, proposed a remedy for it by advocating that temporary increased rank be given those Air Corps officers performing duties which called for higher rank than that actually held by them.

The Air Corps Act of July 2, 1926, embodied the necessary authority to award this increased temporary rank to Air Corps officers, where circumstances warranted it, but for certain valid reasons this particular provision of the Act was not carried out until this year.

The Special War Department Board, headed by the Hon. Newton D. Baker, former Secretary of War, and the President's Federal Aviation Commission made similar recommendations with respect to temporary increased rank of Air Corps officers, and these recommendations, coupled with the emphasis placed upon this need by the organization of the G.H.Q. Air Force, produced a situation which caused the War Department to set the machinery in motion to make the proposition of temporary increased rank for Air Corps officers an actuality.

Elsewhere in this issue of the News Letter is published a War Department announcement of the temporary increased rank given to the Commanding Officer of the G.H.Q. Air Force, his staff, and the commanders of the First, Second and Third Wings.

Special Orders of the War Department just issued announce further temporary promotions of Air Corps officers, whereby Lieut.-Colonels Delos C. Emmons, William C. McChord, Jacob E. Fickel, Frederick L. Martin, Majors Henry W. Harms and Junius W. Jones assume the temporary rank of Colonel, and Majors Oliver P. Echols, Harold A. Strauss, Frank D. Lackland and Dudley B. Howard, that of Lieutenant-Colonel.

The new assignments given to the Air Corps officers temporarily promoted

V-6725, A.C.

thus far are stated below:

Brig. General Henry C. Pratt from Wright Field, Ohio, to Langley Field, Va. as Wing Commander, Second Wing, G.H.Q. Air Force.

Brig. General Henry H. Arnold, Wing Commander of the First Wing, G.H.Q. Air Force, remains at his present station, March Field, Calif.

Col. Gerald C. Brant goes from Brooks Field to Barksdale Field, La., as Wing Commander of the Third Wing, G.H.Q. Air Force.

Colonels Emmons and McChord remain at their present stations, the former as Wing Commander of the 18th Composite Wing, Fort Shafter, T.H., and the latter as Wing Commander of the 19th Composite Wing, Albrook Field, Canal Zone.

Colonels Harns and Jones also remain at their present stations, the former as Commandant of the Air Corps Primary Flying School at Randolph Field, Texas, and the latter as Commandant of the Air Corps Technical School at Chanute Field, Rantoul, Ill.

Colonel Jacob E. Fickel, Chief of the Buildings and Grounds Division, Office of the Chief of the Air Corps, Washington, D.C., assumes the duty of Commandant of the Air Corps Advanced Flying School at Kelly Field, Texas; while Lieut.-Colonel Frank D. Lackland, at present on duty in the Plans Division, Office of the Chief of the Air Corps, assumes the duty of Chief of the Field Service Section, Materiel Division, Wright Field, Ohio.

Lieut.-Colonels Echols, Strauss and Howard remain at the Materiel Division, Wright Field, in their respective positions of Chief of the Engineering Section, Chief of the Procurement Section and Chief of the Administrative Section.

Colonel Martin, upon the completion of his present course of instruction at the Army War College, Washington, goes to the Materiel Division for duty as Executive thereof.

The Air Corps officers assigned to duty on the staff of the Commander of the G.H.Q. Air Force will be stationed at Langley Field, Va.

The orders issued to the officers above named become effective on March 2nd, next.

The foregoing assignments to duties involving temporary rank are merely a part of the entire plan which, the War Department has announced, will also involve assignment of appropriate rank to the commanding officers assigned to groups and squadrons.

---oOo---

War Department Orders just issued direct Col. Henry G. Fisher, now on duty as Chief of the Plans Division, Office of the Chief of the Air Corps, to proceed on July 1st, next, to Maxwell Field, Montgomery, Ala., and assume duties as commanding officer of that field and as Commandant of the Tactical School.

AIR CORPS MANEUVERS WITH CAVALRY

During the past year, Flight D, 16th Observation Squadron, Marshall Field, Fort Riley, Kansas, together with a detachment from Brooks Field, Texas, participated in the Cavalry School maneuvers, which continued throughout a whole month. One flight, consisting of three O-19 airplanes, with Captain Calvin E. Giffin as flight commander, cooperated during the early part of the exercises with the mechanized cavalry. The other flight, consisting of three O-25C airplanes, with Captain N.R. Laughinghouse in command, cooperated with the horse cavalry at first, and during the latter part of the maneuvers, with the mechanized forces.

The maneuvers were very successful on both sides. It was the first time in history that airplanes were used with the mechanized cavalry in such maneuvers. The results were highly satisfactory, and it was found that the airplane is indispensable in maintaining constant surveillance over enemy mechanized forces, due primarily to the high mobility and large area of operation of this force in all directions.

In the course of these exercises, it was also found that it is necessary to send out friendly airplanes in advance to reconnoitre for the mechanized forces.

---oOo---

MIAMI FLIGHT PROVES VALUABLE TRAINING

Brooks Field, Texas, was substantially represented at the recent Air Races at Miami, Fla., a flight of 22 airplanes and personnel comprising 23 officers and 18 enlisted men, commanded by Lieut.-Col. G.C. Brant, commander of the field, taking off on January 7th for Miami, via Barksdale and Maxwell Fields and Lakeland, Fla. Landing at Lakeland for gas, the flight had the pleasure of attending the dedication of one of the most splendidly planned and constructed airports in the country. Possessing surfaced runways, permanent buildings, meteorological equipment, etc., and situated on the shores of a lake three miles in length and about one and one-half miles in width, which affords an excellent harbor for seaplanes, this airport is the pride of the citizens of Lakeland, who turned out en masse to attend its dedication. That evening the good people entertained the 12th Observation Group with a dinner dance, and the personnel from Brooks Field will long remember this most gracious gesture of hospitality.

Several tactical problems were carried out during the flight, and everyone is of the opinion that one flight of this nature is more valuable for tactical training than many worked out at the home airdrome.

V-6725, A.C.

G H Q AIR FORCE STAFF AND WING COMMANDERS

A recent announcement of the War Department is to the effect that the principal members of the General Staff of the GHQ Air Force, which officially comes into being on March 1, 1935, have been designated, and have reported to the Air Force Commander, Lieut.-Colonel F.M. Andrews, for temporary duty in Washington. The eventual strength of Colonel Andrews' Staff will be about 23 Air Corps officers, and such additional officers of the other Services as may become necessary, but, initially, only a few will be assigned. As the need for additional Staff officers becomes apparent, they will be selected. Those now designated are:

Major Hugh J. Knerr, A.C., Chief of Staff.

Major Harvey S. Burwell, A.C., Assistant Chief of Staff, G-1, Personnel.

Major Follett Bradley, A.C., Assistant Chief of Staff, G-2, Intelligence and Public Relations.

Captain George C. Kenney, A.C., Assistant Chief of Staff, G-3, Operations and Training.

Major Joseph T. McFarney, A.C., Assistant Chief of Staff, G-4, Supply and War Plans.

Wing Commanders have been designated as follows:

1st Wing (West Coast) Lieut.-Colonel Henry H. Arnold, A.C.

2nd Wing (East Coast) Lieut.-Colonel Henry C. Pratt, A.C.

3rd Wing (Central States) Lieut.-Colonel Gerald C. Brant, A.C.

As has previously been announced, Colonel Andrews will be given the temporary rank of Brigadier General. Major Knerr will be temporary Colonel, and the Assistant Chiefs of Staff will be temporary Lieutenant-Colonels. The Commanders of the 1st and 2nd Wings will be temporary Brigadier Generals, and the Commander of the 3rd Wing will be temporary Colonel.

---oOo---

AN AIR-MINDED GOVERNOR

Aviation enthusiasts in the State of Washington, particularly members of the 41st Division Aviation, National Guard, are pleased with their Governor and Commander-in-Chief, "because Governor Martin likes aviation."

The Chief Executive of the State was active in securing the new National Guard hangar at Felts Field, Spokane, and is a regular passenger across the State in National Guard airplanes. One of his three sons, Dan Martin, holds a student pilot's permit, while the youngest son, Frank, attends all National Guard camps each year.

ARMY AIR CORPS FLIGHT TO PANAMA CANAL ZONE

On or about March 1st, next, the 31st Bombardment Squadron, a unit of the 1st Wing of the recently created General Headquarters Air Force, with 10 Martin B-12A airplanes, will depart from Washington, D.C., on a one-stop flight to the Panama Canal Zone. The intermediate stop will be at Miami, Florida, for refueling. The squadron will be under the command of Captain Harold D. Smith, Air Corps, who will have 15 of his squadron officers and 16 of his enlisted men accompany him. The home station of this Squadron is at Hamilton Field, near San Rafael, Calif., the new Air Corps field to which it recently moved from March Field, Riverside, Calif.

The purpose of the flight is to provide routine air navigational and technical training for Air Force personnel.

Present plans call for the squadron to proceed to Rockwell Field, Coronado, Calif. on or about February 10th, for the purpose of a check of the equipment at the Air Corps Depot at that station. From Rockwell Field, Captain Smith will lead his Squadron to Washington, D.C., for the take-off southward. The planes will be equipped with the latest radio instruments and other air navigation equipment.

It will be recalled that ten similar Army airplanes, under the command of Lieut.-Col. Henry H. Arnold, Air Corps, successfully carried out a long-distance flight from Washington, D.C., to Fairbanks, Alaska, and return, in the summer of last year. On the return trip, and for the first time in aviation history, this Flight connected Alaska and the mainland of the United States by air without an intermediate stop, the journey from Juneau, Alaska, to Seattle, Wash., being made in $5\frac{3}{4}$ hours.

On the Panama Flight, the 31st Squadron will leave Washington in the early morning for Miami, a distance of 918 statute miles. After the planes are refueled, the second leg of the flight will be to France Field, Canal Zone, the planes proceeding directly over the Caribbean Sea. The State Department has arranged with the proper foreign Governments for the airplanes to fly over any of their territories that may be traversed en route.

Captain Smith's personnel will include
V-6725, A.C.

the following officers and enlisted men:

Officers:

Major Fabian L. Pratt, Medical Corps, Flight Surgeon.

1st Lieuts. John C. Moore Edgar T. Noyes
James W. Spry Donald J. Keirn
Donald R. Lyon Chas. B. Stone, III
2nd Lieuts. Lloyd R. Watnee Eugene H. Beebe
Wm. M. Garland Marvin L. Harding
William Ball Chas. G. Williamson
Roy H. Lynn

Radio Operators

Staff Sergeant Kennard D. Wilson

Sergeants Harold E. Cooper, Allan P. Cross

Corporal Rudolph Lesnick

Airplane and Engine Mechanics

Master Sergeant Charles F. Gravlin

Technical Sergeants William H. Blackden,

Nels E. Swanson, Karl T. Wiedekamp,

Staff Sergeants Philip P. Monroy, Francis L.

Kurtz, George V. Newman, Thomas F. Tooney,

Mathew A. McGraw, Paul S. Patterson, Robert W. Stauffer.

Sergeant Joe Howard.

---oOo---

ADVANCED AVIGATION TRAINING UNIT STILL AT IT

The student officers of the Advanced Avigation Training Unit are now in their fourth week of instruction. With the morning spent in the classroom, the afternoons spent in the air and the evenings dedicated to the solution of problems to be turned in the next morning, the students are having difficulty finding all that "spare" time someone foolishly told them to expect at Rockwell Field. To break the monotony and maintain the "mental alertness" of the students, trips to Catalina Island and the Douglas Aircraft plant have been added to the curriculum at strategic points.

---oOo---

WEATHER BUREAU FLIGHTS BY NATIONAL GUARD AIRMEN

A cooperative program with other governmental agencies has been carried on by the 41st Division Aviation, Washington National Guard.

Starting July 2, 1934, pilots of the Division Aviation have been making daily Weather Bureau flights for the airways weather station at Felts Field, Spokane, Wash., with the result that 217 hours of weather flying is today recorded.

The average flight takes one hour and 20 minutes, and altitudes ranging from 17,000 to 20,000 feet are attained. Oxygen tanks are used on many trips. Temperatures of several degrees below zero were encountered. Every pilot in the Squadron has engaged in these weather flights, which have proven very satisfactory to the Weather Bureau.

Many flying hours have been accumulated by the 116th Observation Squadron in its cooperative program with the Forestry Service. Forestry District No. 1, located generally in the Spokane region, is the largest forest district in the United States.

For the last two years thousands of C.C.C.

students have been in this region, freeing the forests from blister rust. It is in this work that the National Guard planes cooperated mostly.

Radio communication has been another important phase of the cooperative program. Every Monday night the Squadron conducts communications with the 148th Field Artillery, Idaho National Guard, at Coeur d'Alene; the 161st Infantry regiment, Washington National Guard, Spokane, and Regular 4th Infantry troops at Fort George Wright, Spokane.

---oOo---

PURSUIT TO BECOME ATTACK

Personnel of the 17th Pursuit Group, March Field, Riverside, Calif., have noted with keen interest the announcement that this Group is shortly to be changed to the 17th Attack Group. Already Attack Tables of Organization, Attack Manuals, Supply Tables, and tactical lectures on Attack Aviation are making their appearance.

Much of the anticipated sorrow at seeing their units reconstituted to Attack and having, consequently, to give up the single-seaters has not been in evidence, probably largely due to the belief that the Group will be supplied with the new Northrup Attack plane. This plane has been seen at this station on several occasions as a result of test flights from the nearby factory, and its performance and appearance have been very heartening to its prospective future pilots.

---oOo---

ANNUAL INSPECTION DIVISION CONFERENCE

The annual conference of the Air Corps Inspection Division, for the discussion of technical matters in connection with aircraft maintenance and inspection in the various Control Areas, was held at the San Antonio Air Depot, Duncan Field, Texas, beginning February 4th. Attending were Captain Max F. Schneider, Chief of the Inspection Division, Office of the Chief of the Air Corps; Captain H.A. Bivins, Technical Supervisor, Fairfield Air Depot Control Area, and his assistant, Staff Sergeant Frank D. Blair; Captain B.J. Toohar, Technical Supervisor, Middletown Air Depot Control Area; Captain Ames S. Albro, Technical Supervisor, San Antonio Air Depot, and his assistant, Staff Sergeant Elliott Scott; and Staff Sergeant Ross P. Peck, assistant to Captain C.W. Sullivan, Technical Supervisor, Rockwell Air Depot Control Area, who was unable to attend.

---oOo---

The annual inspection of the San Antonio Air Depot was made January 28-29 by Colonel Wm. S. Browning, of The Inspector General's Office, Washington, who had also made the previous annual inspection. Col. Browning expressed himself as greatly pleased with conditions at the Depot and as having noted much improvement thereat since his last inspection.

REPORT OF THE FEDERAL AVIATION COMMISSION (Continued)

Under the heading of "Procurement of Military and Naval Aeronautical Materiel" the Federal Aviation Commission, in its report, made the following recommendations:

59. The paramount importance of quality in military aircraft should be recognized, and procurement policies should be fixed with primary reference to the securing at all times of the best material. Price should not be the primary consideration.

60. The general purpose in the relations of the government to the industry engaged in manufacturing Service aircraft should be to maintain units sufficiently stable and sufficiently well organized so that they would be available for expansion in the event of war. The strength and efficiency both in design and in production of the individual manufacturing units, rather than the number of independent units existing, should be regarded as the test of the nation's industrial preparedness.

61. Procurement policies should be planned to encourage the development of integrated manufacturing units carrying on their own research, development, design, and production work.

62. The practices of the government departments procuring aircraft should, as far as practicable, be the same. The Federal Director of Procurement should promulgate the necessary directions to this end.

63. Every effort should be made to organize procurement policy so that the supply of each general type of aircraft for replacement and for modernization should proceed at a substantially regular rate, and so that there may be a substantially regular flow of productive work in the plants of the aircraft industry.

64. The War and Navy Departments should so organize their technical forces as to obviate the simultaneous functioning of any personnel in the roles of competitor and of judge.

65. The development of new types of aircraft should continue to be provided for either by design competition or by experimental contracts for a specific article, but the rules now governing formal design competitions should be modified to allow administrative flexibility, and in particular to provide for the holding of competitions in which design development is allied with experimental construction of the article designed.

66. The Army and Navy should adopt a policy in holding design competitions by which details of the military characteristics of the aircraft and equipment desired to be created shall be disclosed only to fully responsible competitors, of American nationality, and qualified for the work contemplated in the opinion of the Secretary of War or of the Navy.

67. The announcements of design competitions should include the statement of the fixed price at which, subject to bonuses and penalties for performance, machines from the best designs will be purchased from the orig-

inators of the types.

68. Where the interests of the government clearly require that the construction of equipment from a particular design be thrown open to general competition or that orders for such construction be allocated to others than the originator of the design, royalties should be paid to the originator in reimbursement for the right to use his drawings, calculations, and production information.

69. The attempt to introduce a standard catch-all patent-license clause into all developmental contracts for aircraft and aeronautical material should be abandoned. Reproduction rights on patentable inventions should accrue to the government, in connection with a developmental contract for purchase of an article embodying the inventions, only in case the contractor is engaged to conduct a specific experimental development under governmental direction.

70. Existing provisions of law should be amended as necessary to allow direct suit (but not injunctive procedure) against a manufacturer alleged to be infringing a patent in connection with work done by him for the Federal government.

71. Explicit authority should be granted to the Secretary of War and to the Secretary of the Navy to negotiate contracts for quantity purchases of aircraft and other aeronautical material, subject to the requirement of a full report to Congress in each case where the authority is used.

72. In order that there may be no incentive for an uneconomic expansion of plants that could not be kept regularly running at anywhere near their capacity, it should be procurement policy to avoid any concentration in any one plant of an abnormally large proportion of the total military and naval work then outstanding.

73. When purchases are to be made as the result of a process of competitive bidding, the Secretary of War or Secretary of the Navy should be authorized either to award a contract for the whole quantity sought to the bidder who can best perform the work, or to divide the work among two or more bidders if that be in the best interests of the government.

74. Where definite profit limitation is to be employed, as in the present Naval Construction act, it should not be applied to the individual contract, but, in the interest of equity, of simplicity of accounting, and of stimulation of technical development, should be extended over all the work done for the government Service over a considerable length of time.

75. Industrial mobilization plans in the field of aeronautics should be pressed by the joint effort of the Army and Navy.

In Recommendation No. 62, reference is made to the Federal Director of Procurement. This position was designated by Executive Order of June 10, 1933, and Admiral C.J. Peoples, who occupies this position, has already directed

the appointment of an interdepartmental committee on aircraft and is proceeding to remove at least the most unnecessary and unreasonable of the existing contradictions.

With reference to Recommendation No. 50 of the Federal Aviation Commission, which relates to the promotion situation in the Army, with special reference to the Air Corps, and which was quoted in the previous issue of the News Letter, the Commission's discussion on this recommendation is as follows:

"The promotion status of officers of the Air Corps is unsatisfactory and destructive of morale. It is recommended that steps be taken to improve this situation and that the War Department should propose early remedial action to the Congress as a part of a general revision of the Army's promotion scheme; upon the present effects of which the Baker Board has commented with appropriate feeling.

As a general policy, the Commission recommends that new legislation governing Air Corps personnel recognize the necessity for a continuous flow of promotion in spite of the disproportionately large numbers of officers in the lower ranks that the proper organization of any air force seems to require. Appropriate mechanism is needed for selection for promotion, transfer to nonflying duties, and retirement. The selection system should be such that outstanding officers of the Air Corps may be advanced to the higher ranks at an early age, while their flying ability is yet unimpaired. Otherwise, important and responsible air commands will be held by officers no longer physically fit, or by junior officers of inadequate authority.

A general revision of the Army's promotion system is needed to provide permanent and really adequate relief. Any such revision will be sufficiently slow in its workings to require a substantial amount of time to rectify present evils completely. As a temporary expedient, while a permanent program is being worked out and making itself felt, we urge that temporary promotion to rank commensurate with the duty currently performed should be made an accepted principle for general application in the Air Corps. The Morrow Board proposed in 1925 a limited use of such temporary promotion in connection with field commands, and provision was made in the Air Corps Act of 1926 for temporary promotion of not to exceed two grades in certain specific instances. The provision has never been put into effect because of opposition within the Air Corps, an opposition apparently based in part upon the fear that as a temporary expedient it would defeat the development of any permanently satisfactory plan, and in part upon an anticipation that injustice would be done by giving temporary promotions to officers holding certain field commands while officers of equal age, experience, ability, and permanent rank upon staff or headquarters duty would have no opportunity for corresponding special treatment. We propose that the first objection be overcome by refusing to admit that it exists, and by emphasizing our united conviction of the vital urgency of prompt action for permanent promotion revision in the interest

of the whole Army. We propose that the second objection should be met by removing the discrimination that creates it. The Baker Board made a special study of the working of the present law in individual cases and announces that under existing law there is now a "possibility of advancing temporarily about seventy-five percent of the Air Corps officers." We recommend that the authority to give temporary promotion by not to exceed two grades be extended to permit such promotion in any case where appropriate certification is made that the duty imposes responsibilities and demands qualities normally corresponding to a higher rank than the permanent rank of any officer currently available for the assignment. If it is true that squadrons now generally commanded by captains and first lieutenants should carry the temporary rank of major for their commanding officers, it is no less true that Air Corps officers serving with the General Staff or upon important duty with the Materiel Division at Wright Field or in the office of the Chief of Air Corps or in other administrative details are in many cases performing duty that not only justifies but fairly demands materially higher rank than the permanent one to which the present incumbents have attained.

The mechanism of making these temporary promotions should of course be suitably safeguarded, and the temporary rank should be given either upon the specific direction of the Secretary of War or upon that of a board of high-ranking officers periodically convened to deal with the matter as selection boards are convened in the Navy Department. Whichever mechanism may be adopted, however, there should be no further delay in applying the principle that was recommended by the Morrow Board in 1925 and again by the Baker Board in 1934, and that should now be put into effect upon a large scale and under a broadened legislative authority to meet a situation so extreme that it partakes of the aspect of an emergency.

A particular case of need for the use of temporary promotion develops in connection with the appointment of a commanding general for the new General Headquarters Air Force. Though the present law permits promotion by one or two grades on account of field command, legal authorities have apparently questioned the propriety of extending that authority to the creation of general officers beyond those individually authorized by law. It should be perfectly clear that the commanding officer of the General Headquarters Air Force should be chosen from among all the colonels and lieutenant-colonels upon the Air Corps list, that there should be freedom to select the one of that group best qualified to exercise the supreme field command of the Air Corps, and that the appointment should carry with it temporary rank as a Major General. To clear up the legal status, and to make a temporary elevation by as much as three grades possible where a lieutenant colonel has been chosen for the command, specific legislation is needed."

The Federal Aviation Commission, in expla-

nation of Recommendation No. 51 - that authority to select a Chief of Air Corps from among all the officers of long service in that arm, which has now expired, should be renewed, states:

"The Air Corps Act of 1926 provided for what was then felt to be an emergency situation due to the scarcity of high-ranking officers in the Air Corps by allowing the selection of a Chief of Corps, with the temporary rank of Major General, from among all the officers of the Corps with fifteen years or more of service. The rule for other arms of the Service is that the Chief must be a colonel or a general of the line at the time of his appointment.

The authority granted by the 1926 Act expired on July 1, 1934, and when the necessity of selecting the new Chief of Corps arises the Secretary of War will be limited to a choice among the colonels, of whom there are now only nine and three of whom have had practically all of their Service experience with lighter-than-aircraft, unless the expired authorization be renewed. We recommend that it should be done by simple amendment of the Act of 1926 to extend the broadened authority for choosing the Chief of Corps. We hope that in the near future some general action will be taken to improve the Army's promotion situation and that a larger number of Air Corps officers of outstanding ability and varied Service experience will have attained to the highest ranks as a result.

We have suggested in the previous recommendation that in addition to extending the authority for the appointment of the Chief of Air Corps it should be specifically broadened to allow a similar freedom in the appointment of the Commanding General of the General Headquarters Air Force."

Touching on the modifications in the Air Force organization now being put into effect, the Commission stated that the initial organization of a G.H.Q. Air Force must be considered experimental, and until this solution has had adequate trial comment thereon is withheld. It is added, however, that there is ample reason to believe that aircraft have now passed far beyond their former position as useful auxiliaries and must in the future be considered and utilized as an important means of exerting directly the will of the Commander in Chief. An adequate striking force for use against objectives both near and remote is a necessity for a modern army, and the projected G.H.Q. Air Force must be judged with reference to its effectiveness in this respect.

"We have no doubt," the Commission states, "that there will be a progressively greater measure of independent action of aircraft in military operation as the capacities of aircraft increase. We interpret the present proposals as a step towards provision for such increased independence, and as a test of its effectiveness under the strategical conditions dictated for the United States by geography and national policy. Further steps may in due course become necessary. If the degree of independence provided under the present plan is so used as to lead to the development of an effective strategy of air force employment (and every opportunity should be provided to that end, both in the Army and in the Navy), the de-

sirability of further organizational changes may in due course become apparent.

The present Naval organization appears to be sufficiently flexible to develop its air forces, both ship-based and shore-based, for as much independence of action against naval objectives as may be feasible. Bombing and torpedo attacks from aircraft carriers have already become a common feature of naval maneuvers. We assume that they will be extended as rapidly as the capacities of existing equipment and the accumulation of experience permit.

In the strategy of independent air action the long-range flying boat, shore-based, plays an important part. That type of aircraft also has important functions in connection with Fleet operations. They must not be neglected. We recommend that national defense policy continue to provide for naval flying-boat operations on a large scale, especially in those areas where sheltered water for flying boat operations is much easier to find, and much more widely diffused through the zone of strategic interest, than are suitable fields for landplanes."

Referring to the numerical strength in airplanes and personnel of the Army Air Corps, the Commission, while deploring that the military air forces of the world, almost without exception, are in process of expansion or of more or less complete reequipment and modernization to secure increased power, states that this must be reckoned with as a fact, and that the air program made in 1926 is no longer adequate either to the present appreciation of the military importance of aircraft or to the maintenance of the standing of the United States in air power; that while we are laggard neither in numbers of aircraft nor in their general quality at the present time, we might easily become so if we fail to accept the lessons of the current policies of other Powers.

Inviting attention to the program of the Navy calling for 1910 airplanes to be in service by 1941 in order to keep the supply of aircraft abreast of the needs of the Naval organization, as modified by the construction of new vessels for the Fleet and otherwise, and to the plans of the War Department for a program calling for an expansion to 2320 planes by 1938, the Commission states that nothing short of a radical change in the international situation should be allowed to interfere with the completion of these programs or with the making of the necessary appropriations to carry them out. Long before their completion they may call for further modification, but for the present they offer a working basis which should be accepted.

The Commission, from its own investigations, urgently recommends that, whatever numerical strength be authorized by the Congress, it be based not only on the estimated numerical strength of foreign powers but also, and more particularly, on the performance and military qualities of foreign aircraft and the means available to them to exert their power upon us. The Commission is of the opinion that progress has been, and will continue to be, more rapid in aeronautical engineering than

in any other branch of science applied to warfare, and consequently that numerical strength is of less importance to national security than leadership in quality of materiel and personnel.

"In this connection," the Commission states, "it should be our policy not only to lead in the development of superior aircraft, navigational equipment, and armament, but also by means of comprehensive exercises and maneuvers in time of peace to evolve tactical doctrines appropriate to such equipment and to train a personnel of highest efficiency. It is considered important that such exercises be conducted under various climatic and geographical situations and designed to simulate as closely as possible actual war-time conditions.

The natural and common disposition has been to concentrate a substantial proportion of the aerial operations of the Army and Navy in regions where climatic and geographical factors and simplicity of supply problems permitted continuous operation at high intensity. No such selective principle operates upon the determination of a theatre of war, and the difficulties of war should be faced in peace to the limit of practicability. In this connection we wish to express our special commendation of the experimental operations of the Army and Navy in Alaska, and to endorse the recommendations of the Baker Board that military air operations in that territory should be put on a year-around basis on a substantial scale as a means of training personnel to operate under Arctic conditions and of developing specialized equipment necessary for such operation. In the same connection, we single out for commendation also the Navy's plan to send an aircraft carrier upon a cruise in northern waters in midwinter to acquire experience in carrier service at low temperatures and in the face of sleet and snow. We wish also to approve the recommendations of the Baker Board upon the development of the instrument-flying technique. Officers of the Army Air Corps have pioneered in extraordinary developments in instrument flying, and especially in the development of blind-landing systems and technique. We urge that the Services carry on diligently with research in that field, and at the same time proceed to make full and rapid practical application of what has already been learned."

In the matter of the inter-relationship of the National Defense Services, the Commission, while appreciating the efforts now being made for coordination, feels that the present degree of mutual understanding between the Army and Navy is less than might be desired; that the machinery for settling differences in matters of detail lacks something in effectiveness and that the arrangements for keeping commanders in the field notified of their respective responsibilities in joint operations with neighboring units of the sister Service are strikingly inadequate. There are, of course, a variety of devices which have been suggested from time to time for effecting improvement in these matters. Final authority reposes in the President, but it is not to be

expected that the Commander in Chief can take personal charge of every point that may arise. In the British government adjustments can be made through a Committee of Imperial Defense, upon which both military and civilian members sit. It has often been persuasively argued that a Department of National Defense should be created, with a Secretary of National Defense and the personnel immediately attached to his office as the inter-Service coordinating factor. Another possibility would be the designation by the President of a representative of his office, responsible only to himself, who would sit as a neutral member upon the various joint boards on which the two armed Services are now equally represented.

Asserting that while this matter lay beyond its scope, the Commission considered it so serious that it recommends that the whole problem of military organization and of inter-Service relationships be made the subject of extended examination by some appropriate agency in the near future. The Commission records its belief that the present difficulties are not the result of any peculiar defects in the present division of functions between the Army and the Navy. In countries where there are three services, with an independent air force providing the third, the opportunities for conflict of opinion about who is to do what and how seem to be no less marked than under our own two-Service arrangement. The need for definite machinery to compose such conflicts, and to effect in the last extremity an intervention of neutral parties, is likely to exist under any system.

In elaboration of the recommendation that a number of officer pilots of the Regular Army and Navy should be assigned annually to the other service and given duty with active air units, the Commission, in view of the complications that appear likely to exist in joint operations of any two distinct services under the best of conditions, whether both be in the air or one in the air and the other upon the surface, deems it particularly important to insure close understanding of each other's problems by the officers of the Army and Navy air arms. Though a general rotation of duty between the Army and Navy is manifestly impracticable, the Commission believes it quite reasonable to propose that a considerable number of officers of each Service be given the opportunity of doing tours of duty with the other and of learning its operations at first hand. Such exchange of personnel ought to extend not only to tactical units, but also to the flying schools, to the tactical and other Service schools and to the repair depots and other technical installations. The constant interchange of personnel between the Naval school at Pensacola and the Air Corps Training Center at San Antonio is particularly recommended, and a detail of naval officers in increased numbers to the Air Corps Tactical School and of at least two or three Air Corps officers (instead of the single individual that is now the rule) to the

Naval War College. While recognizing the present shortages of officers in both Services, the value of the experience gained through such exchanges and of the improved mutual understanding that may result appear so great as to justify an assignment of a small percentage of the regular officer personnel to exchange duty.

Recommending that the experimental and developmental work of the Army and Navy should be conducted on an increased scale, the Commission, while recognizing the importance of an adequate number of aircraft and trained personnel in an air force, believes it quite as important to insure in peace time that the equipment is of the highest quality that the existing state of knowledge permits. A great deal of criticism had been heaped on the Army and Navy in the early years of the past decade for excessive expenditures on experimental work and not enough on quantity procurement of aircraft. Assuming that this criticism may then have been valid, it now appears that the Services are in danger of switching to the opposite extreme, that is, instead of spending too much on experiment and development they seem likely to spend too little, for it is upon current experimental appropriations and upon the wisdom with which they are expended that the quality of our aircraft of a few years hence will depend.

The past year was marked by incessant attacks upon the quality of American military aircraft, it being alleged that they are in every essential respect hopelessly inferior to corresponding aircraft of European origin. Asserting that some of the misleading statements made almost advertise upon their face their own intemperateness and exaggeration, and that other statements are undoubtedly true, though the implications drawn seem excessive, the Commission points to this as an interesting commentary on the state of the public mind that these charges seem to be essentially similar to those being made at the same time in the very countries which have been held up to the United States as examples to imitate. The British press has rung with assertions of the remarkable qualities of American aircraft and of the inability of the available British types even to keep pace with American commercial machines, while a section of the press in France has debated furiously the rumored inferiority of French military aircraft to those of most of the rest of the world.

While avoiding statistical researches on the aircraft of various nations, the Commission has nevertheless made enough comparisons in particular lines of development to reach certain general conclusions, and it seems clear that American aircraft design and the aerodynamic qualities of American airplanes are at least the equal of any others in the world. It is in the variety of power-plant types and in their special adaptation to certain military purposes that we are comparatively weak. The net result is that American military planes powered with American engines seem on the whole, surveying the entire range of types required, to be as good as any that exist elsewhere. In some respects and in some particular types they appear quite beyond challenge,

while in others they are, seemingly because of lack of intensive application to the special problems that they present, inferior. No reason is seen, however, why an intensive development in the particular phases where we have been backward should not be superposed on the remarkable development that has already taken place in the United States in improving aerodynamic and structural qualities and in increasing the practical utility of medium-powered engines.

That American engines of from 200 to 750 horsepower or thereabouts are at least the equal of any others in the world in reliability, economy of first cost and of operation, and general serviceability seems to be beyond question. If evidence of that fact were needed it is perhaps to be found in the use of engines of American design (and in many cases built in American factories) on 14 percent of all the aircraft in service on European air lines in the spring of 1934. That degree of inroad on the European market was, of course, made in the face of a strong nationalistic tendency in most countries to insist upon the exclusive use of home products on air lines benefiting by governmental support. It is a curious fact that our special weakness is at the two extremes of the power range. Relatively little work has been done on high performance engines of under 160 h.p., a field in which the British industry has made peculiarly its own. Engines in that power class are, of course, of little military interest. They meet the requirements of the private pilot. The upper end of the power scale, on the other hand, is primarily a military responsibility. There is a real need for high performance engines of 1,000 horsepower or more. A considerable amount of experimental work in that zone has been done in the United States, but none of it has reached the point of production. To put into production a first class Service engine of from 1,200 to 1,500 h.p. and weighing approximately one pound per horsepower is likely to require several years at best. Such development should be given the highest possible priority.

Recommending a special watch over the liquid cooled engine, the Commission states that the development of air-cooled power plants by the American industry since 1920 has been so remarkable that there has been danger that the liquid-cooled types would fall completely by the wayside. Though air-cooling seems the ideal arrangement for most use, the liquid-cooled types still appear to have marked advantage for certain military functions. Experimental work on that class of engine ought not to be allowed to lapse.

Touching on the introduction of supercharging in which the United States has also pioneered, the Commission states that while our manufacturers and Service personnel have never lost sight of the virtues of this development, there appears to have been an excessive emphasis on the building of the whole equipment into the normal structure of the engine and avoiding any additional mechanism, the resultant tendency being to limit effective supercharging of service engines to compara-

tively modest altitudes. A diligent application of experimental effort is recommended to the end that American military engines may have available a wider range of supercharger capacity than is now common.

With respect to the diesel type of engine which also found its first successful aeronautical application in America, the Commission feels that the military and naval services have shown somewhat less interest than would have been appropriate. This type of engine, exploding its charge by the heat of its own compression rather than by electrical means, seems particularly desirable where long range is sought, due to its fuel economy, and it seems reasonable to hope that diesels can be developed which will substantially increase the range available with gasoline available in the same aircraft. Most European countries are taking very active interest in the aircraft diesel for military service, and recommendation is made that the United States join their number.

Pointing to the increased efficiency of present day aircraft engines, the change from wooden to metal structure in aircraft with resultant increased cost of production, the development of a multitude of accessories no less important in their effect on efficiency than the airplane and engine themselves, the Commission, after considering the cost of keeping up the necessary government testing facilities and laboratories and of those purely military developments which the Army and Navy carry on in their own plants, is left with the conviction that to keep abreast of progress the annual appropriation for experiment and development in the Army and Navy can scarcely be less than twice the 1934 figure, which was \$5,300,000.

To be continued in next issue.

---oOo---

WIND DIRECTION INDICATOR FOR NIGHT LIGHTING SYSTEM AT OLMSTED FIELD

The remote control system for the operation of the landing flood lights at Olmsted Field, Middletown, Pa., incorporates a feature whereby the operator of the system may cause the proper bank of floodlights to be put into operation, at the same time taking into account the wind direction. This is a very valuable feature for this particular installation, inasmuch as a set of control switches is located in the telephone exchange, some distance from the field, so that the system can be put in operation as required by the telephone operator, who, without some sort of wind indicator, would have no means of knowing which bank of lights to turn on.

The device for indicating which bank of flood lights should be used consists of an ordinary windvane mounted above the building in which the remote control switches are located, and in the construction of which is incorporated a contact bearer with one contact segment for each bank of floodlights on the field. The vane proper operates a small brush which makes electrical contact with one of these contact segments at a time, so that the particular segment with which contact is being made at any particular time depends on the wind direction. The small brush is of such width that the in-

stant it loses contact with one segment, it gains contact with the adjacent segment. Each segment is connected through a 12-volt transformer to a small signal light over the appropriate floodlight control switch, and the contact bearer oriented with respect to the cardinal points, so that the segment making contact when the wind is blowing in a given direction causes a bulb to be illuminated over the switch controlling the proper floodlight bank to be used for the given wind direction. Thus, the operator does not have to take into consideration the wind direction at all when he puts the night lighting system into operation, but simply turns on the control switch over which the signal light is burning.

---oOo---

THE NEXT CLASS AT THE ARMY INDUSTRIAL COLLEGE.

According to an announcement recently made by the War Department, a total of 43 officers of the Regular Army have been selected for detail as students at the Army Industrial College, Washington, D.C., for the 1935-1936 course. These officers will report to the Director of the Army Industrial College between August 15 and 21, 1935.

Included among these 43 officers are eight from the Army Air Corps, nine from the Q.M. Corps; two, Medical Corps; two, Finance Dept.; four, Corps of Engineers; nine, Ordnance Dept.; two Signal Corps; one, Chemical Warfare Service; one, Cavalry; one, Coast Artillery Corps; one, Field Artillery; two, Infantry, and one, Adjutant General's Department.

The Air Corps officers selected to attend the Army Industrial College are as follows: Lieut.-Col. Henry B. Clagett, Kelly Field, Texas; Majors Hubert V. Hopkins, Fort Leavenworth, Kans.; Clinton W. Howard, Office of the Chief of the Air Corps; Capt. Merrick G. Estabrook, Jr. and Fardoe Martin from Office of the Chief of the Air Corps; Muir S. Fairchild and Arthur W. Vanaman from Maxwell Field, Ala.; and 1st Lieut. Park Holland from Wright Field, Dayton, O.

---oOo---

STATUS OF FLYING TRAINING AT RANDOLPH FIELD

At this writing the 62 Flying Cadets of the upper class at the Primary Flying School at Randolph Field, Texas, are putting the finishing touches on their final stages of training. They are performing several hours per day of both day and night aviation, and thus far, according to the News Letter Correspondent, none have been so lost that they couldn't get back home. The 37 lower classmen are climaxing their training on the Primary Stage by performing all the acrobatics they can in their big PT-3's.

---oOo---

The appointment of Lt. Col. A.W. Robins as Assistant to the Chief of the Air Corps with rank of Brig. General, for 4 years from Jan. 1, 1935, and his assignment as Chief, Materiel Division, Dayton, O., was recently announced.

V-6725, A.C.

NEW ZEALAND CITIZENS EXPRESS GRATITUDE TO U.S.

Extremely grateful for the spontaneous response of the American Navy, Army and Air Force authorities at Honolulu in their comprehensive search for the late Flight-Lieutenant C.T.P. Ulm and his crew, Messrs. George Littlejohn and L.J. Skilling, the Airport Board, the Aero Club and the Chamber of Commerce of the City of New Plymouth, New Zealand, joined in formulating a resolution, sent to the Hon. George A. Bucklin, Consul General for the United States in New Zealand, in which it was stated that no greater effort could have been made to find the missing airmen; that the manner in which the search was conducted was most heroic and inspiring; that the immediate action taken to assist one of the British Empire's foremost pioneers in aviation will long remain in the minds of the British people and particularly the citizens of New Plymouth, to whom Flight-Lieutenant Ulm was a valued friend, as a man and a great advocate of aviation.

It will be recalled that Ulm and his two companions, in their monoplane "Star of Australia," took off from Oakland, Calif. at 6:41 p.m., E.S.T., December 3rd, on a 2408-mile flight to Honolulu, the first leg of their long journey to Australia. For 18 hours the silver and orange-colored monoplane had roared on its way over the ocean. Flying through stormy weather at an altitude of 12,000 feet, Lieut. Ulm maneuvered for two hours, attempting to pick up the radio-direction beacon before sending out his first S.O.S. It was at 7:30 a.m. (Hawaiian time), 1:00 p.m., E.S.T., December 4th, that the first warning came from the voyagers that they were facing trouble, the radio messages stating that very little gasoline was left, that the airmen were off their course and did not know their position. Distress messages came from the ill-fated airplane at frequent intervals, the last one at 9:30 a.m. announcing that the airplane was afloat. A far-flung naval search was carried on by 18 submarines, 3 mine layers and two Coast Guard vessels, supplemented later by some 35 airplanes from the Army and the Navy. All efforts to locate the three intrepid flyers proved in vain.

The Mayor of New Plymouth, N.Z., in a letter to the American Consul-General, quoted a resolution passed by the Borough Council on December 17th, in which there is conveyed the sincere admiration of the people of New Plymouth at the wonderful organization, the humanity and sympathy displayed by the United States Army and Navy authorities at Honolulu in their extensive, heroic and inspired search in connection with the disaster to Flight-Lieutenant Ulm and his companions. It was stated that New Zealand people will have great difficulty in placing into words their admiration at the wonderful response of the American Army and Navy authorities at Honolulu to the distress signals sent out by the imperiled airmen; that no greater effort could have been made to find them; that in common with the rest of the Dominion the people of New Plymouth appreciate Honolulu's stirring effort and will not forget

this great proof of American humanity and sympathy, and that it was only regretted that such a great achievement was not crowned with success.

New Plymouth, a city of 16,500 population, is 228 miles northwest of Wellington, New Zealand. This city takes an exceptional interest in everything that pertains to aviation. The trans-Tasman sea flights usually land at that place.

---oOo---

INSTRUMENT FLYING AT BARKSDALE FIELD

An added impetus was recently given to instrument flying at Barksdale Field, Shreveport, La., by the installation of hoods and the latest type instruments on two BT-2B type airplanes assigned to that field. Heretofore instrument flying had been conducted in PT-3 airplanes only. The BT-2B airplanes being equipped with radio and inter-phones have permitted training in radio beam flying under the hood, a phase of training which has recently proved highly important in the Air Corps.

. ---oOo---

AIR TACTICS DEMONSTRATED AT FORT LEAVENWORTH

The 20th Pursuit Group, Barksdale Field, La., led by Major Millard F. Harmon, Jr., Commanding Officer, made a controlled flight to Fort Leavenworth, Kansas, on January 3rd, for the purpose of training in unit aviation and demonstrating Pursuit tactics to the Command and General Staff School.

The flights from Barksdale Field to Fort Leavenworth and return were made in accordance with a movement table as outlined by the Operations Officer. Each squadron was assigned a different time of take-off and route, and assembly points were designated within 30 miles of objectives.

Upon arrival at Fort Leavenworth, a flight of two-seater airplanes, furnished by that station, was sent up to represent a hostile Bombardment group. The Pursuit group intercepted and "destroyed" the hostile Bombardment by means of machine gun fire from the flanks and rear, and successive bombing attacks from above.

The pilots who made the flight were high in their praise of the courtesies extended by the personnel of Fort Leavenworth.

---oOo---

In the Jan. 15th News Letter it was stated that two maps are being planned for use of Army pilots, Map No. 38A combining 5 present Air Corps strip maps, viz: No. 17, Yuma to Los Angeles; No. 31, Nogales-Tucson-Phoenix; No. 32, San Diego - Phoenix; No. 38, San Diego to Tucson; No. 39, Los Angeles - San Diego; and Map No. 59, a new compilation (Washington to Charleston, S.C. and Savannah, Ga., via Richmond, Va. and Ft. Bragg, N.C.) to serve the route to Miami, Fla., now requiring the use of 4 maps from Washington, D.C. to Savannah. Map No. 59 will not be ready for distribution for about six months, as the preparation thereof began only recently.

RANDOLPH FIELD'S AMATEUR RADIO STATION W5AUC

After a silence of two years, Amateur Radio Station W5AUC is back on the air at Randolph Field, Texas. This modern radio station is now located in the Radio Laboratory of the Academic Building, and is owned and operated by Private Charles Ken Smith, of the 52nd School Squadron, who is one of the Instructors in Code at the Ground School of the Air Corps Primary Flying School, and operates the station in his spare time as a hobby in carrying on experiments in the phases of short wave communication developments. The transmitter of W5AUC for sending code signals is one of the most powerful and finest built outfits in the southwest. It is crystal-controlled, and transmits on a frequency of 7036 kilocycles. It has a power input range from 100 to 1,000 watts, the maximum allowed for amateur radio stations by the Federal Communications Commission. W5AUC has carried on two-way communication with 28 foreign countries, comprising six continents, and the maximum distance attained was 12,600 miles, or half way around the world. W5AUC is a member of the W.A.C. Club, which comprises radio amateurs of the world who have carried two-way communication with the six continents - North America, South America, Europe, Asia, Africa and Oceania.

The station is also a member of the American Radio Relay League, whose members assist in relaying messages all over the United States.

W5AUC has just been appointed official relay station for this league, and is handling personal messages from the personnel of Randolph Field to any address in the United States. Having joined the Army Amateur Net, W5AUC now stands air drills every Monday night, at 8:00 p.m., and after drill exchanges radiograms with the other members of the net.

To insure positive delivery and speedy reply, daily traffic schedules are maintained by W5AUC, and radio stations located all over the states. This arrangement of schedules requires considerable time, and at present there are only three daily schedules, but more tests are being made and schedules added daily. W5AUC has also formed an All-Army Air Corps Net to facilitate the handling of messages between Air Corps fields, direct, and for emergency weather information.

The receiving equipment of W5AUC consists of an all-wave 12-tube superheterodyne, which has been adapted for the reception of code signals. The antenna system utilized is of a type which reduces local interference and automobile ignition radiation to a minimum.

To date, W5AUC has about three hundred radio call cards from all over the world, and more are coming in every day. These cards verify the fact that a two-way communication was established between Station W5UAC and the station which has forwarded the card.

---oOo---

ACTIVITIES OF THE 33RD PURSUIT SQUADRON

The 33rd Pursuit Squadron started the calendar year of 1935 with a larger maneuver than has been performed by that squadron since its trip to California in 1933. Besides 12 officers and 46 enlisted men of this organization, approximately 10 officers and 10 enlisted men of other organizations of the 8th Pursuit Group, Langley Field, Va., were attached to the detachment of the maneuver. On January 4th, one officer and 27 enlisted men departed from Langley Field in reconnaissance cars and trucks loaded with equipment for a month's stay in the field. While no official report has been received, correspondence from the men who went in these cars leads to the belief that they have not had the pleasure trip some of them anticipated. Cold and generally unfavorable weather has prevailed since their departure, even throughout the Gulf States through which they have traveled. The planes which were to carry the remaining officers and enlisted men going on the maneuver to Miami, Fla., were detained at Langley Field for three days due to the dense fog which held the entire Atlantic seaboard in inactivity for that length of time. They did leave, however, on January 10th, and it is presumed they arrived at Miami the following day to join the truck train.

After participating in the Air Races at Miami, the entire detachment has been traveling by truck and plane through various of the Gulf States, camping at such cities as Mobile,

New Orleans, and Atlanta. To date there have been but three casualties reported, one having been sustained in the football game between Langley Field and the team from the Naval Air Station at Pensacola, which was played at Miami (and which the News Letter Correspondent regrets to say was won by the Navy), and the two others being ailments mostly caused by the cold and otherwise severe weather. Hope is expressed that the detachment will return to Langley Field on the scheduled date without further mishap.

---oOo---

PHOTOGRAPHIC ACTIVITIES OF 2nd PHOTO SECTION

A detachment of three men accompanied the Second Bombardment Wing, Langley Field, on the Fourth Corps Area Maneuvers for the purpose of photographing landing fields, etc., and developing gun camera film. Most of the remaining personnel are engaged on a five-lens mapping project for the United States Coast and Geodetic Survey. This project includes about 2500 square miles of the coastal area and the inland waterways from Norfolk, Va., to the Neuse River in North Carolina. It is being photographed from 5,000 feet as contrasted with usual mapping altitudes of from 10,000 to 15,000 feet, and while excellent detail is being obtained there is also an extensive increase in the number of prints and the amount of laboratory work required.

TRAINING AT RANDOLPH FIELD
By the News Letter Correspondent

Those who have been away from the Training Center for some years would marvel at the changes which have taken place since the schools at Brooks and March Fields were concentrated at Randolph Field.

In the old days the basic training was more or less a duplication of the work done on the Primary Stage in a larger ship. Today, however, the basic training is more diversified and progressive. The instruction is arranged so that the student's interest is not permitted to lag through repetition. After the most elementary phase, which includes explanation of controls and instruments, use of brakes and throttle, taxiing, take-offs, landings, turns, climbs, glides, stalls, spins, spirals, chandelles, eights, cross-wind take-offs, forced landings and slips, the student's week includes: accuracy, air work, forced landings, formation, dual instruction, strange field landings, aviation, cross-country trips, night flying and instrument flying, and he does not know what is coming next.

Aviation and night flying have been discontinued on the Primary Stage and are all done on the Basic Stage. In the last few years there have been added to the Basic Stage more instrument flying, four phases of strange field landings, and night flying has been increased from one hour of local flying in the old days to three phases of local flying, including flood light landing, wing tip landings and flare landings. In addition to this, the student secures 12 hours of night aviation.

Although the War Department has authorized, as a part of the curricula of this School, radio missions, including radio control and radio beacon flying, this phase of training has not been given in the past, due to the fact that this School has not been supplied with the necessary radio equipment. This training is very essential in preparing a man to take his place in a tactical organization, and we are looking forward to the time when the radio equipment will be supplied.

The training of permanent personnel is also handicapped by the lack of this equipment. The modern facilities installed at Randolph Field have been a great aid in improving the instruction at this School. Each stage is subdivided into flights, and each flight has its own billowac, where ships, lockers for the students, parachutes and flight office are concentrated, thus obviating such practice as going to one end of the flying line to secure the parachute when the ship is being flown from the other end. Everything is more convenient for

the student.

The glorified position of check pilot has practically gone the way of the "Dodo," and the student who is making satisfactory progress does not have this old mental hazard to overcome. The instructor and the flight commander now pass judgment upon the progress of the student. Those students who make unsatisfactory progress are never brought before the Faculty Board unless the instructor, flight, and stage commander, and the officer in charge of flying so recommend. Loose leaf logs are submitted daily on each student, and once submitted they are never seen again by the instructor, thus obviating his opinion of the student's work today being influenced by the work that the student did yesterday. When a student is transferred from one instructor to another, the new instructor does not know what progress the student made under the old instructor. This system was adopted in the hope that it would force the instructor to grade the student only on that day's work.

We believe we are doing a good job here at Randolph Field and invite criticism, and those officers who have not been at Randolph Field recently should try to get here in order to see what we are doing.

---oOo---

36TH PURSUIT SQDN. IN FIELD EXERCISES

Since January 4th, 11 officers and 26 enlisted men of the 36th Pursuit Squadron, stationed at Langley Field, Va., have been participating in field exercises in the Fourth Corps Area. Motor vehicles were used in conveying the enlisted men and supplies to the Wing Concentration Camp at the Pan American Airport at Miami, Fla.

The itinerary included the following cities: Langley Field, Va. to Miami, Tampa and Tallahassee, Fla.; Mobile, Ala.; New Orleans, La.; Montgomery, Ala.; Fort Benning, Ga.; Atlanta, Ga., to Langley Field.

The purpose of the field exercises was to qualify units in:

- (a) Occupation and evacuation of strange airdromes day and night.
- (b) Employment, Transportation and bivouacking of Flying Echelons.
- (c) Employment, Transportation and use of minimum mobile Field Equipment Kits, and their replenishment from distant supply points.
- (d) Administration, supply and logistics of dispersed units.
- (e) Employment of mobile field radio communications.

---oOo---

PROMOTION OF NONCOMMISSIONED OFFICERS

The previous issue of the News Letter contained the names of 97 Technical Sergeants and 17 First Sergeants, listed in the order of their standing on January 1, 1935, on the eligible list for promotion to the grade of Master Sergeant, also the names of 150 Staff Sergeants on the eligible list for promotion to the grade of Technical Sergeant.

Due to the lack of space it was not possible to publish the complete list of Staff Sergeants on the eligible list, and a list of the remaining 297 names is given below, as follows:

151. Gregg, Emmett C.	213. Davis, Golden R.	275. Murdoch, Edward
152. Meeks, John D.	214. Caraway, Rayford A.	276. Anderson, George
153. Harth, George J.	215. McQuillan, William F.	277. Hollon, Orval L.
154. Brock, Norris	216. Killian, Wiley	278. White, Andrew
155. Visbal, Germain A.	217. Wiley, William	279. Harwell, Walter L.
156. Goulla, Jack	218. Scott, Orval W.	280. Kanig, Albert V.
157. Novak, Louis W.	219. Fowler, Byron L.	281. Perkins, William E.
158. Martin, Paul H.	220. Benson, Harry A.	282. Johnson, George D.
159. Gutierrez, Arnaldo	221. Galloway, Roy F.	283. Morris, John E.
160. Dooney, John J.	222. Blanchard, Leslie D.	284. Frost, Samuel K.
161. Carr, James W.	223. Bullock, Thomas	285. Ritter, Paul A.
162. Hodges, Herbert F.	224. McGinnis, Edward V.	286. Tuite, Edward J.
163. DeFord, Lyman	225. Braun, Joseph F.	287. Edwards, Samuel T.
164. Warren, Henry M.	226. Carnes, Frank D.	288. Dixon, Frank E.
165. Delaney, Samuel H.	227. Ashley, Floy L.	289. Messer, Floyd
166. Chestnutt, Herman L.	228. Rosser, James C.	290. Hughes, Ted C.
167. Parnes, Max	229. Chipperfield, Merton L.	291. Greene, Charles C.
168. Morrison, Jay P.	230. Williams, Leo V.	292. Jordan, Martin M.
169. Armbruster, Otto	231. Harvey, Curtis A.	293. Groves, Earl C.
170. Tetu, Dona E.	232. Lawson, Lane L.	294. Rogers, John O.
171. Beckham, Reuben S.	233. Golden, Stephen B.	295. Grem, Eugene
172. Bishop, Chalmers N.	234. Beck, Henry J.	296. Stipe, John H.
173. Abromitis, Jacob	235. Booth, William H.	297. Malczewski, John
174. Bryan, Hugh	236. Frick, Russell H.	298. Littlejohn, Lyman L.
175. Weltz, William M.	237. Cichon, Paul	299. Maxwell, Jesse M.
176. Flores, Alberto	238. Shown, Winfred G.	300. Andrews, Arthur
177. Williamson, Henry	239. Lutes, Amos D.	301. Marley, James L.
178. Hall, Bolton	240. Willard, Fred J.	302. Kingsley, Wallace W.
179. Hunsberger, Horace K.	241. Bullivant, Norman C.	303. Kirkwood, Cecil G.
180. Kolb, Peter, Jr.	242. Utterback, Harlan R.	304. Bezek, John S.
181. Collins, Jacob	243. Griffis, Isaac	305. Segalbaum, Charles S.
182. Mobley, Emmett A.	244. Wright, William P.	306. House, Joseph M.
183. Martin, Troy V.	245. Boucher, Albert C.	307. Brenckman, Emil
184. Townsend, Joe H.	246. Kaufman, Eugene H.	308. Wallace, Stephen L.
185. Laza, Joseph C.	247. Stewart, James E.	309. Carmack, Thomas B.
186. Podraza, Walter H.	248. Pitre, Harry J.	310. Hrivnak, John C.
187. Pond, Everett L.	249. Wooten, Mack F.	311. Stevenson, Albert E.
188. Nielsen, Jean	250. Hammer, Stewart W.	312. Nied, Bernard J.
189. Lynch, Marion M.	251. Euton, James A.	313. Watson, Henry F.
190. Powers, Barron C.	252. Sayers, Samuel	314. Hadley, Arthur R.
191. Prince, Kerman	253. Eidman, Arthur G.	315. Adams, Gerald
192. Kelly, Bernard F.	254. Malone, Roderick W.	316. Hogan, Edward J.
193. Anning, Richard S.	255. Young, Earl S.	317. Montgomery, Joseph
194. Browning, Earl H.	256. Deek, Ross P.	318. Patterson, Homer L.
195. Shelloy, Verl A.	257. Featherer, Joseph	319. Sherman, Sidney
196. Hollis, Claud D.	258. Bardell, North B.	320. Lage, Wilbur
197. Mulkey, Lloyd	259. King, Oliver E.	321. Kingsley, William S.
198. Winter, David	260. Dodson, Edward S.	322. Lucas, Cecil
199. Koblitz, Monroe	261. Blakesley, Wayne R.	323. Griffin, Ralph G.
200. Knowles, James R.	262. Mason, Robert E.	324. Rogozinski Wads. Arth
201. Summers, Robert F.	263. Sanchez, John L.	325. Tyler, Fred O.
202. Weeks, Edward	264. Hucks, Jesse J.	326. Salter, Joseph E.
203. Garcia, Adelmo N.	265. Waters, Horace G.	327. Bailey, Archie
204. Burt, Albert B.	266. Smith, Percy G.	328. Gershon Samuel
205. Farrell, Herbert W.	267. Keyser, Walter K.	329. Boston, George R.
206. Browning, Wilbur G.	268. O'Toole, Fred	330. Rahn, Sidney M.
207. Gilipsky, James L.	269. Baskas, Thomas J.	331. Schaeffer, Henry J.
208. Martin, Robert D.	270. Conner, Thomas	332. Peters, Johnie R.
209. Mooney, James F.	271. Parsley, Walter S.	333. Kremer, Dallas M.
210. Kirkpatrick, Everett	272. Pittman, Hugh B.	334. Wyatt, James W.
211. Salmon, Henry F.	273. Rhodes, Alva E.	335. Girard, Leonard F.
212. Bush, Lawrence	274. Duffy, William J.	336. Walter, James R.

337. O'Neill, Leslie M.	374. Gresser, Charles J.	411. Yeager, Wallace H.
338. Wedeman, Maurice H.	375. Bertsch, Edward	412. Campbell, Colin A.
339. Wagcner, Earl B.	376. Wilson, Dewey E.	413. Wickham, Peter M.
340. Garrison, Neil B.	377. Finch, Harold G.	414. Eggen, Milton P.
341. Mitchell, Orie L.	378. Jones, Daniel H.	415. Wehling, George W.
342. McLaughlin, Frank A.	379. Guinn, Charles S.	416. Bremer, Robert A.
343. Coke, Bruner	380. Moore, Elmer E.	417. DeRossett, Armand J. Jr.
344. Bulloch, Fulton G.	381. Davis, Roby C.	418. Arthur, James H.
345. Jansen, Otto W.	382. Goodrich, George H.	419. Gilbreath, Thomas J.
346. Rhoden, Joe R.	383. Thompson, Thomas W.	420. Lea, Samuel R.
347. Letchworth, Roy	384. Coyne, Joseph	421. Hackwith, Herman L.
348. Janis, James	385. Macomber, Donald G.	422. Bolles, George F.
349. Anderson, Clarence B.	386. Beach, Maurice M.	423. Cornell, William M.
350. Farquhar, Wilber W.	387. Wright, William R.	424. Noble, Harold P.
351. Aikensm, Arren	388. Smith, Monroe D.	425. Midkiff, James R.
352. Saltzgeber, George S.	389. Jennings, Simpson L.	426. Foye, Robert
353. Cunningham, Verdell E.	390. Salles, Roger A.	427. Mills, Francis X.
354. Lipp, Henry	391. Haganan, Paul B.	428. McLean, Sherman A.
355. Bauer, Toney	392. Beckner, John K.	429. Tilghman, Marion S.
356. McDonald, Marvin C.	393. Thompson, John W.	430. Blair, Frank D.
357. Johnson, Wilbur C.	394. Greier, Matthew H.	431. Smith, Samson
358. Higgins, Carl M.	395. Ducheane, Joseph O.	432. Thacker, Lloyd W.
359. Kramer, Harry	396. Relyea, Frederick R.	433. Brown, Abram
360. Mitchell, Norman J.	397. Burger, Lewis H.	434. Cathie, Arthie L.
361. Peckham, Robert N.	398. Coy, Charles H.	435. LeDoux, Francis
362. King, George F.	399. Crow, Charlie D.	436. Henry, Harvey A.
363. Knoppe, Pavl	400. Gorse, John H.	437. Quirk, John D.
364. Starichenko, William A.	401. Sommer, James A.	438. Frey, Harvey E.S.
365. Bishop, Raymond M.	402. Harrison, Benjamin	439. Spaulding, Ralph E.
366. Robinson, William T.	403. Williams, Marvin R.	440. Hawkins, Milton H.
367. Marstin, Charles P.	404. McKenzie, Marvin C.	441. Bobulski, Frank
368. Wilson, Kannard D.	405. Wojnicki, Rudolph J.	442. Tucker, Douglas M.
369. White, Charles D.	406. Lord, Frank H.	443. McMenamin, Frank J.
370. Russell, Cyril F.	407. Miller, Howard M.	444. Meider, Henry W.L.
371. Laymen, Gilbert E.	408. Baker, Leonard A.	445. Giganti, James M.
372. Lindbeck, Ruben	409. Hamilton, Donald E.	446. Maidel, Mark J.
373. Andrick, Ralph L.	410. Miller, Jean E.	447. Bell, Thomas O.

In the matter of actual service in the Army, two of the Technical Sergeants on the eligible list for promotion to Master Sergeant, published in the previous issue of the News Letter, have to their credit over 26 years; one First Sergeant, over 24 years; two Technical Sergeants and one First Sergeant, over 23 years; four Technical Sergeants and two First Sergeants, over 22 years; two First Sergeants, over 21 years; one First Sergeant and ten Technical Sergeants, over 20 years; one First Sergeant and five Technical Sergeants, over 19 years; one First Sergeant and six Technical Sergeants, over 18 years; two First Sergeants and eleven Technical Sergeants, over 17 years; fourteen Technical Sergeants over 16 years; two First Sergeants and thirty Technical Sergeants, over 15 years; two First Sergeants and four Technical Sergeants over 14 years; one First Sergeant and five Technical Sergeants, over 13 years; one First Sergeant and three Technical Sergeants, over 12 years, and one Technical Sergeant over 11 years.

Of the first 150 Staff Sergeants on the eligible list for promotion to the grade of Technical Sergeant, also published in the previous issue of the News Letter, one has over 28 years of actual service in the Army; two over 27 years, one over 26, four, 25; four, 23; four, 22; three, 21; eight, 20; fourteen, 19; eighteen, 18; thirty, 17; thirty, 16; and thirty-one, 15.

---oOo---

"BLIND" VERSUS "INSTRUMENT" FLYING

The following interesting item is reprinted from the February 1st issue of the Navy News Letter:

"An error which needs correction is the habit some pilots have of referring to 'Instrument' flying as 'Blind' flying. This is entirely incorrect. 'Blind' flying is exactly that, and applies to the old days of going through clouds, fog, or heavy rain by simply 'hanging on' for a brief period, trusting to the stability of the airplane and considerable luck to reach fairer weather. The air speed meter and perhaps the whistle of the wires were the only effective aids to this kind of flying, which was a hazardous affair

at best, attested to by the fact that some of the country's most experienced air mail pilots not infrequently got into bad spins and tight high speed spirals while trying to go through 'blind.'

'Instrument' flying, on the other hand, is a perfectly safe and sure method of getting through bad stuff. It simply means flight which is correctly directed and controlled by the indication of suitable instruments. This is just about the opposite of 'Blind' flying. Let's keep ourselves straight on this. (Thanks to VF Squadron SIX for setting us clear on this.)"

---oOo---

BILLS INTRODUCED IN CONGRESS

A Bill (H.R. 5057), introduced in the House of Representatives by the Hon. John J. McSwain, M.C., amends the Air Corps Act, approved July 2, 1926, permitting the Secretary of War or the Secretary of the Navy, at his discretion, to purchase abroad or in the United States, with or without competition by contract or otherwise, such design, aircraft, aircraft parts, or aeronautical accessories as may be necessary in his judgment for experimental purposes in the development of aircraft or aircraft parts or aeronautical accessories of the best kind for the Army or the Navy, as the case may be.

Several other portions of the Act of July 2, 1926, are amended, these dealing with advertising for bids on aircraft, aircraft parts or accessories; the inspection of manufacturing plants producing aircraft for the Army and Navy; the auditing of the books of contractors furnishing aircraft to the government, and the rights and privileges of aircraft designers who are the winners of design competitions for government aircraft.

The Bill also amends the National Defense Act of June 3, 1916, as amended by the Act of June 4, 1920, by providing for the detail of officers of the Army Air Corps for temporary duty with the Navy Air Corps and for the detail of officers of the Navy Air Corps for temporary duty with the Army Air Corps.

---oOo---

Having in view the establishment of a United States Army air base in Alaska to provide a supporting Army air base at a favorable and strategic location for the protection of the North Pacific and Alaskan coasts and coast cities, a Bill (H.R. 5034) introduced in the House of Representatives by the Hon. John F. Dockweiler, M.C., of California, authorizes and directs the Secretary of War to acquire by donation, purchase or condemnation, such land in Alaska as he may deem necessary and suitable for the establishment of an air depot. A sum not to exceed \$4,000,000 is authorized to be appropriated for the establishment on such land of a United States Army air depot by the construction and installation of the necessary technical buildings, utilities and appurtenances thereto.

---oOo---

The organization of a Junior Air Reserve to promote national defense is the purpose of a Bill (H.R. 4336), introduced in the House of Representatives by the Hon. John J. McSwain, M.C.

The Bill authorizes and directs the Secretary of War to organize a civilian component of the United States Army, to be known and designated as the "Junior Air Reserve," and to establish rules and regulations for the operation of same. All persons between the ages of 18 and 21 years, of sound physical condition and with education at least equivalent to a full high school course are eligible to be listed as cadets of the Junior Air Reserve, and they shall be entitled to receive such emblem or designation to wear upon the clothing as the Secretary of War may prescribe while receiving such course of instruction and training in aerodynamics and in

the art of flying as shall be prescribed by the Secretary of War.

For the encouragement of the Junior Air Reserve, the Secretary of War is authorized to detail Regular flying officers, or Reserve flying officers called to active duty, to engage in the instruction and training of cadets of the Junior Air Reserve in such private flying schools and centers of air training as may be selected for that purpose, where the number of cadets shall not be less than twenty and where there are approved standards of instruction and training.

Subject to the restriction that there will be no conflict with the work of the Army Air Corps, the use of Army air fields is permitted from time to time, also of airplanes, aircraft generally, and equipment belonging to the Air Corps of the Army, if and when in the judgment of the Secretary of War, such use is wise and proper in promoting the art of flying and in the training of said Junior Air Reserve.

Certificates of graduation evidencing full membership in the Junior Air Reserve shall be issued to all cadets satisfactorily passing the final examination and tests. They shall then be entitled to wear, at pleasure, such uniform as shall be prescribed by the Secretary of War, and such insignia and other designations and decorations thereon or upon civilian clothing, as may be prescribed. Complete record will be kept of all such graduates of training for use in the event of a national emergency.

The Secretary of War is authorized to select each year 500 of the most promising and efficient graduates of the primary instruction authorized for a further course of instruction for a period of not exceeding six months at any school or flying field of the United States Army and then to offer at least 100 each year of said graduates in the primary instruction Reserve commissions as second Lieutenants, and to call said second lieutenants to active duty as Reserve officers in the United States Army Air Corps, for such time as the Secretary of War may from time to time prescribe.

---oOo---

A Bill (H.R. 5232) introduced by Hon. Ewing Thomason, M.C., of Texas, seeks to fill up the commissioned strength of the Air Corps by July 1, 1935, to the number of 1,514 officers, in grades from colonel to second lieutenant, inclusive, through commissioning as second lieutenants applicants who hold commissions as first or second lieutenant in the Air Reserve, and are graduates of the Air Corps Training Center. Other provisions of the Bill authorize the recruiting of the enlisted strength of the Regular Army to 165,000 men, exclusive of Philippine Scouts, by July 1, 1940, and calling to active duty not to exceed 2,000 Reserve officers of the combatant arms and the Chemical War Service per year, the number from each arm to be regulated in accordance with respective commissioned strengths.

UNUSUAL MISSIONS OF NATIONAL GUARD AIR CORPS

The National Guard aviation performs many missions in addition to the normal flying incident to their routine training. Two unusual missions were recently reported to the National Guard Bureau, one performed by the 44th Division Aviation, New Jersey National Guard, and the other by 26th Division Aviation, Massachusetts National Guard.

Four planes under the command of Major R.L. Copsey, N.J. N.G., recently participated in the search for the lost American Airlines Condor passenger plane in the vicinity of Little Falls, New York.

At the request of the General Manager of the American Airlines, the New Jersey planes reconnoitered an area approximately 200 square miles north and west of Albany. With flying conditions most hazardous over desolate, treacherous country in sub-zero weather, the reconnaissance was continued for over two hours. The lost plane was located by Dean Smith of the American Airlines. It having been decided to drop food and medicine to the damaged plane, Lieut. Emerson, of the 26th Division Aviation, Massachusetts National Guard, was selected for the mission. Major Copsey accompanied Dean Smith back to the scene of the accident to coordinate the civil and military activities by radio and to light the scene of the accident so the military plane could drop its supplies. It took approximately two hours until a successful drop was made at 11:30 p.m.

What the American Airlines thought of the work of the New Jersey Squadron can be seen from a letter written by Mr. C.R. Smith, the President of this concern, to Major Copsey, as follows:

'Dear Major Copsey:

I wish to take this opportunity to extend to you and the members of your organization our sincere appreciation for the valuable assistance rendered employees of American Airlines in their recent search for our lost airplane.

Flying conditions over desolate, treacherous country in open airplanes in sub-zero weather required men whose devotion to duty was so highly commendable as to be beyond adequate expression.

It would be considered a favor by American Airlines if, through a copy of this letter, a better understanding of the duty performed by your organization could be conveyed to those at the head of the National Guard as an exhibition of courage and stamina of which your State can well be proud."

The 26th Division Aviation, Massachusetts National Guard, was particularly active in the past few months in training and in carrying out missions of mercy under the most adverse flying conditions.

Recently a flight of three planes of this Squadron took off from the Boston Airport at 11:10 p.m. on an extended mission to Cleveland, Ohio, to obtain train-

ing and experience in night navigation under winter conditions. A direct course was set for Albany, N.Y., and thence to Buffalo. A heavy snow storm and fuel shortage forced the flight to land at Syracuse at 2:55 a.m. After refueling the flight took off again at 3:45 a.m., flying above the storm to Rochester, N.Y., where improved weather conditions were met. Landing was made at Buffalo for re-servicing the ships, and thereafter the flight proceeded to Cleveland and return without further incident.

Extremely low temperature prevailed over the entire route. Heavy snow on the ground at Buffalo made it difficult to handle the ships. The radio beam receivers purchased by the Squadron gave some trouble initially, but the flight personnel were able to clear this up without outside aid. The personnel consisted of the regular combat crews without mechanics or technical personnel. Captain Edward S. Beck, A.C., Mass. N.G., was the flight commander.

National Guard planes, coast guardsmen and harbor and Boston police were recently mobilized in an intensive but fruitless hunt to find two boys reported adrift on an ice floe in Dorchester Bay, more than a half mile off Carson Beach, South Boston.

It appears that the boys were seen playing on the ice off Carson Beach late in the afternoon. Some individual called up the police station stating that he had seen them float off toward open water on an ice cake which broke loose from a solid sheet stretching toward shore. Unwilling to consider this message a hoax, despite the fact that no report of any missing children had reached them, the police utilized every means at their disposal to locate them.

Airplanes were called for, and six pilots of the 26th Division attending a testimonial dinner to Maj.-General Erland F. Fish, volunteered and hurried under screaming motorcycle escort to take the air in near-zero temperature for an hour's vain search of the harbor.

The rescuing party of airmen, quickly organized by Major Clarence E. Hodge, and including Captain Albert Elson, Lts. Clyde C. Jakway, Francis P. Kendall, Theodore E. Baker and Stanley Beck, had the first airplane in the air less than half an hour after they reached the airport. The second airplane took the air some 30 minutes later, carrying spotlights on the wings which, combined with the flares, served to light up a wide territory of ice floes and open water.

The flares released from the two airplanes brilliantly illuminated the lo-

cality where the boys were reported to have been seen, and so well was this work done that newspaper offices were deluged by telephone calls from inquisitive South Bostonians. The fliers flew back and forth over the area at an altitude of little more than 100 feet, scanning every bit of the ice. Subsequently flares were thrown to light up the ice field adjacent to open water as far out as the main ship channel.

Earlier the same day, some of these same pilots participated in dropping food and supplies to four Nantucket fishermen, marooned on Muskegat Island for five days.

---oOo---

17th PURSUIT GROUP IN FIELD EXERCISES

The 17th Pursuit Group, March Field, Calif., is now engaged in its annual field exercises. Under the plan being followed, one squadron at a time spends two weeks in the field with all personnel and equipment. The 95th Pursuit Squadron was encamped at Palmdale, Calif. for one week and then moved to Muroc Lake for the second week's encampment, for, under the Corps Area directive, camps must be moved at least once during the period.

The first week is spent in field exercises to include the problems of field encampment, field maintenance of equipment and tactical exercises, air and ground, from field bases. The second week at Muroc Lake is spent in aerial gunnery.

The morale of the personnel of the Group has materially increased as a result of present activity and that in immediate prospect in aerial gunnery and bomb dropping. The firing which has been done to date demonstrates the practicability of using the P-26 for gunnery with slight modification of the course as laid down in Training Regulations 440-40. It has been found advisable to move the back boundary line from 1400 feet to 2,000 feet for 90 degree approaches and 180 degree approaches.

Experiments have also been made in element firing with the P-26. In the first tests it was found that 100 feet interval is too close for the ground targets to be used in preliminary firing by elements. Targets spaced at 200-foot intervals were next tried and it was found that this was too far. It has been tentatively decided that 150 feet is the proper interval for ground targets fired upon by an element.

The limited experience to date indicates the feasibility of firing by elements with safety and with more than anticipated accuracy. Early tests indicate a degree of accuracy of wing men of about 50% of the score of

the element leader.

Units of March Field have until recently been deprived of the opportunity to fire machine guns and drop bombs in any quantity and with any regularity due to the absence of a suitable range. Authority was recently obtained to use a dry salt lake and adjacent sage brush covered land at Muroc Lake, a site situated about 45 minutes' air time from March Field in the Mojave Desert. It has been found an excellent site, and its acquisition makes it possible for any organization at March Field to fire any day, a fact which will greatly stimulate carrying out these phases of the training program. The personnel of the 17th Pursuit Group confidently believe that any future gunnery and bombing matches in the Air Corps will find them well represented.

Ed. Note: Attention is invited to the experience of pilots of the 20th Pursuit Group, Barksdale Field, La., in their aerial gunnery practice, utilizing P-26's, report of which appears elsewhere in this issue.

---oOo---

CELEBRATION AT HAMILTON FIELD

The bronze plaque, presented by the American Legion, at the entrance of Hamilton Field, which commemorates the glorious heroism of 1st Lieut. Lloyd Andrews Hamilton, who fell fighting as a World War "ace," and in memory of whom the field is named, will be dedicated by hundreds of American Legionnaires of the Fifth District in a service conducted by a Past Department Commander on March 3rd at 2:30 p.m.

The invitation to Hamilton Field was tendered by Major C.L. Tinker to the Fifth District Commander, under whose direction the day's program of business will commence at 10:00 a.m. in Hangar No. 9, and will be followed with mess at 1:30 p.m. in the dining rooms of the four units stationed at the field.

---oOo---

GENERAL WESTOVER VISITS FELTS FIELD

Brigadier-General Oscar Westover, Assistant Chief of the Air Corps, was Spokane's most recent military guest.

General Westover visited Felts Field on his tour of the Northwest, spending two days there. During that time he inspected sites which Spokane is advocating for the location of a Regular Army Air Corps Depot, for which Congressman Sam B. Hill, of Washington, has introduced a bill in Congress, asking for \$4,000,000.

The General passed no comment, reports the News Letter Correspondent, other than to announce that he was going to look at PWA airport projects in his flight over Washington.

AIRSHIP TC-13 IN AIR MANEUVERS

The TC-13 airship, operated by the 19th Airship Squadron, Langley Field, Va., recently returned from Miami, Fla., after having participated in the maneuvers of the 2nd Wing in field exercises conducted in the 4th Corps Area.

The Airship was preceded by an advance party of two officers and eight enlisted men who motored to Miami in a convoy of three trucks. This group erected the portable airship mast which had been constructed in the shops of the squadron at Langley Field. The airship mooring site was established on private land east of the Pan American Airport.

The TC-13 airship departed from Langley Field at 10:20 a.m. as scheduled, although a dense fog covered the airdrome at the time and necessitated following the course of the radio range beacon of Langley Field which had been laid on Miami. At 9:00 o'clock that night while flying off the coast of South Carolina the sky cleared and thereafter offered excellent visibility to observe the celestial bodies by which the course would be steered. The ship arrived at Miami at 4:30 p.m., having completed a non-stop flight of about 900 miles.

The ship remained in Miami four days, during which time she demonstrated her ability to ride her mast successfully in such winds as Miami offered for this season of the year. The higher winds were noted to occur in the early afternoon with velocities reaching a maximum of 30 m.p.h. at the mooring site. One demonstration flight of four hours' duration over the city of Miami and nearby communities was made on the second day in cooperation with the 2nd Wing.

The return flight to Langley Field was made in 18 hours without stops, the ship arriving at Langley Field at 4:00 a.m., where she hovered in flight until dawn, at which time she was landed and docked. The advance party returned to Langley Field three days later.

This flight demonstrated the ability of the TC-13 airship to make non-stop flights of approximately 1,000-mile range, the ability of her personnel and equipment successfully to maintain radio contact throughout the flight with the base station, to fly blind successfully over a distance of several hundred miles and to make proper use of Department of Commerce and Navy aids to navigation.

It is forecast that this flight is but the forerunner of more extensive airship operations in the field made possible when the squadron organization and equipment is modified and improved as a result of the experience gained from this field exercise.

---oOo---

"THE WEST POINT OF THE AIR"

Randolph Field, Texas, has been the scene of much activity for the past ten months. The filming of "The West Point of the Air," Metro-Goldwyn-Mayer's Epic of the Air, without interruption of flying training, is an achievement of which the Air Corps can be justly proud. If this picture meets its expectations, it will be one upholding the high traditions of the Air Corps. It will be a medium through which the country will become more Air Corps conscious. With such actors as Wallace Beery, Maureen O'Sullivan, Lewis Stone, Robert Young, Jimmie Gleason, Jack Pennick, Henry Wadsworth, Robert Taylor, Frank Conroy, Russell Hardie and Robert Livingston, augmented by officers and ladies of Randolph Field, it should be a box office attraction. All the personnel and each activity of the Field played their part in the production of this picture. Richard Rosson, the diminutive but dynamic personality, was the Director. Shots were taken of almost every activity on the field, from the tower of the Administration Building to the basement of the Ground School building. At the Officers' Club mid-summer bathing scenes were taken in the chilly November atmosphere. Ladies in bathing suits did their shivering best to appear quite as if they were basking in the heat of a tropical sun.

For several weeks the field had the aspect of a thriving movie colony, with the hustling movie company keeping the audience of autograph seekers and hero worshippers scrambling from place to place with their sudden migration from one set-up to another.

On February 1st, the last of the company "wrapped it up with all shots in the bag" and slipped away, leaving Randolph Field strangely quiet after weeks and months of abnormal activity. The picture is still to be reviewed and approved by the Army Board. Major Harms, designated the War Department representative, must make final approval. The Movie Board, consisting of Captains J.K. Cannon, Arthur E. Easterbrook and A.C. Strickland, expect to make their final recommendation in the near future. Dame rumor had it that M.G.M. is well pleased with their production.

As a great number of the movie company took part in the filming of "Wings" at Kelly Field a few years ago and are known by officers throughout the service, the names of those who took part in the production of this picture are given, viz: Monta Bell, Producer; Roger Manning, Production and Business Manager; Al Shenberg, John Waters, James McKay, Assistant Directors; Art Brown, Construction; Jack Gertsman, Script Clerk; Clyde de Vinna, Head Cameraman; Charles

V-6725, A.C.

Marshall and Elmer Dyer, Air Cameramen; Paul Vogel, Harry Perry, Bob Roberts, Ray Ramsey, Kyme Mead, Wilbur Bradley, Joseph A. Valentine, Robert Newhard, Irving Glassberg, Al Williams, Jockey Feindel, Walter Strange, Cameramen; Al Sheving, Harry Marble, Herold Baldwin, Harry Parksins, Sam Cohen, Glen Strong, Bill Strong, Dale Deverman, Kay Norton, Walter Rankin, Donald Brigham, Ed Garvin, Jas. Higgins, James Hackett, King Kauffman, Assistant Cameramen; Hank Forester, John Selgraph, Lloyd Isbell, Grip; Dean Dorn, Publicity Man; Bill Grimes, Still Man; George Elder, Prop Man; Jas. Brock, John Dullam, Ted Raymond, Sound Men; Matt Gilman, Utility; Perry O'Brien, Al Leider, John Jens, Wes Shanks, Electricians.

---oOo---

AERIAL GUNNERY FOR THE 20TH PURSUIT GROUP

The 20th Pursuit Group, Barksdale Field, La., will proceed to Chapman Field, Miami, Fla., on Feb. 15th, for two weeks' aerial gunnery training and two weeks of field exercises. Major Millard F. Harmon, Jr., Commanding Officer, will lead the Group, which will be composed of the 55th, 77th and 79th Pursuit Squadrons and the 71st Service Squadron.

The movement will be made in two echelons, ground and air. The ground echelon, commanded by 1st Lt. Manning E. Tillery, will consist of 18 of the latest type Army motor vehicles and will be used to transport mechanics, equipment and supplies.

Due to the inland location and the close proximity of civilian population to the Barksdale Field Reservation, it has been impossible to fire the tow target phase of the gunnery course "A." Hope is expressed that in the near future a permanent gunnery camp may be established near the Louisiana coast and within two hours' flying of Barksdale Field.

Considerable interest has been evinced by pilots of the 20th Pursuit Group as to the outcome of aerial gunnery practice with the P-26 type Pursuit airplane, the latest low-wing Boeing monoplane. Due to the location of the machine guns, two feet, nine inches below the sighting bar, it has been found impossible to bore-sight the P-26 for a range closer than 150 feet without removing the ring cowl-ing. This factor, coupled with the increased speed and visibility, has aroused the interest.

This trip to Miami will be the first movement of troops by motor convoy since the arrival of the 20th Pursuit Group at Barksdale Field on November 1, 1932.

---oOo---

Air Corps officers recently promoted were Major Walter H. Frank to Lieut.-Colonel; 1st Lt. Hobart R. Yeager to Captain; 2nd Lieuts. J.W. McCoy, P.H. Robey, C.G. Williamson and George P. Moody to 1st Lieutenant.

RADIO REPAIR STATION AT DUNCAN FIELD

A new Signal Corps Radio Repair Station, similar to those at the other Air Depots, is being installed in the Engineering Department of the San Antonio Air Depot, Duncan Field, Texas, for the purpose of securing the maximum service from Signal Corps aircraft radio equipment and insuring that such equipment is in first-class operating condition prior to delivery of reconditioned airplanes to tactical and other Air Corps units. This Section is under the immediate supervision of Major Charles T. McAleer, Signal Corps, as Signal Corps Radio Maintenance and Repair Officer, who joined the San Antonio Air Depot last November from duty in the Office of the Chief Signal Officer.

---oOo---

MARCH FIELD PERSONNEL A BUSY OUTFIT

Aside from the field exercises and aerial gunnery, the principal activities which have kept the command at March Field, Riverside, Calif., on the jump during the past 15 days concerned the visit of the Corps Area Inspector, with parades, reviews and inspections incident thereto; daily flying by individual pilots to fill in their form 5's, renewed interest in which is engendered by Circular No. 6, War Department, 1935; the daily half hour devoted to close order flying drill by the whole Group; much emphasis on the Link Trainer and instrument flying; and maintenance and other duties labeled routine, but which call for 95% of all soldier effort.

---oOo---

BROOKS FIELD SEEKS GUNNERY RANGE

Brooks Field is just now much interested in the acquisition of a permanent site for a gunnery and bombing range.

Heretofore, through the courtesy of the owner, a tract of land near Port Lavaca, has been used, but this year the land is not available, and a solution is sought in the proposed purchase of 5,000 acres at Sand Point. Hope is expressed that negotiations may be concluded in time for this year's gunnery.

---oOo---

The first class of officers from the Office of the Chief of the Air Corps taking instrument flying instruction at Bolling Field, D.C., was started Jan. 17th, and was composed of Captains George C. McDonald, L.P. Hickey, E.E. Hildreth and Lieut. M.E. Cross. Due to the extremely inclement weather, it was not possible to conduct this course of instruction continuously, but these officers have made rapid progress and expressed themselves as being most enthusiastic over this type of flying training. The second class will be started immediately upon completion of the present one.

WAR DEPT. ORDERS AFFECTING AIR CORPS OFFICERS

CHANGES OF STATION: To Hawaiian Department:
2nd Lt. Chester P. Gilger, from Barksdale Field, sailing about April 26th;

To Panama Canal Zone: 2nd Lieuts. William D. Eckert, Langley Field; Albert W. Shepherd, Selfridge Field; David H. Baker and Robert Scott, Jr., Mitchel Field, sailing about April 4th.

To Philippines: 1st Lieut. Harold Q. Huglin, Langley Field, sailing about May 14th; also 1st Lieuts. Edwin R. French, Selfridge Field, and Alva Lee Harvey, Langley Field.

To Langley Field, Va.: 2nd Lieut. Paul G. Miller, from Panama Canal Dept.

To Mitchel Field, N.Y.: 1st Lieut. Roland O.S. Akre from Panama Canal Dept.; 2nd Lieuts. Ralph P. Swofford, Jr., and Millard C. Young, from Panama Canal Dept.

To Crissy Field, Calif.: 1st Lieut. Herbert M. Newstrom from Panama Canal Dept.

To Randolph Field, Texas: 2nd Lieut. Robert W. Burns, from Crissy Field, Calif.

To Fort Crockett, Texas: 1st Lieut. Melie J. Coutlee, from Panama Canal Dept.

To Selfridge Field, Mich.: 2nd Lieut. Jarred V. Crabb, from Panama Canal Dept.

To Washington, D.C., for duty in Office of Chief of the Air Corps: Captain George S. Warren, from Selfridge Field, Mich.

To Inglewood, Calif.: Captain Edward M. Robbins, from duty with the Boeing Aircraft Co., Seattle, Wash., to duty with the Northrup Corporation as Air Corps Representative.

To Headquarters, 9th Corps Area: 1st Lieut. A.J. Kerwin-Malone, from March Field, to report to Major-General Paul B. Malone for assignment to duty.

To Panama Canal Zone, sailing about April 4th: 1st Lieuts. Draper F. Henry, Mitchel Field; Thomas L. Mosley, Fort Crockett; Isaac W. Ott, Brooks Field.

RELIEVED FROM DETAIL TO THE AIR CORPS:
2nd Lieuts. Peter J. Kopcsak to Cavalry Division, Fort Bliss, Texas; Robert C. Kryser to Infantry, 2nd Division, Fort Sam Houston, Tex.; Kenneth R. Kenerick to Hawaiian Department for assignment to duty with the Coast Artillery Corps.

RETIREMENTS: Captain Harold F. Rouse and 1st Lieut. Charles H. Earnest, January 31, 1935, for disability incident to the service; Captain Frederick A. Johnson, Scott Field, Ill., to proceed to his home to await retirement.

---oOo---

TRIALS AND TRIBULATIONS OF A FLIGHT SURGEON

Much has appeared in print of late regarding new construction at Air Corps posts, highly complimentary phrases being utilized in describing the appearance of the various buildings, barracks and quarters, and the superlative degree of comfort they afforded to delighted personnel.

But all is not well yet, as testified by a contribution to the News Letter just received from the Brooks Field Correspondent, who

commenting on the considerable amount of publicity given war-time construction of buildings, both residential and official, still utilized at various posts throughout the length and breadth of Uncle Sam's army occupancy, states that it remained for Brooks Field to demonstrate that, in a pinch, a certain ingenuity could be called into play - not to preserve the building but those dwelling within it. As a result of an unusually vigorous onslaught of the elements, not to speak of Time itself, one building among others at Brooks Field is fairly in a state of collapse. The building in question is occupied by Major A.W. Smith, Flight Surgeon, who procured three long poles, formerly used by the Signal Detachment as telegraph wiring material, and proceeded to "prop" them against the timorous building, to the amusement of all observers but to the unquestionably effective steadying of the structure.

The Correspondent concludes with the hope that new construction may be procured for Brooks Field before some of the buildings actually fall down on the occupants.

---oOo---

NOTES REGARDING THE COLD WEATHER FLIGHT

From Hamilton Field word comes of the collapse of the landing gear of a fast B-12 Bomber at Fort Bliss, Texas, piloted by 2nd Lt. Edward W. Suarez. He was not injured.

When last heard from, Capt. Arthur G. Hamilton and 2d Lieut. Birrell Walsh were at Selfridge Field having their planes equipped for the cold weather test flight to Great Falls, Montana, and return. Gigantic skis were being placed under their Martin Bombers, and experimental starters and primers were being installed. The enlisted men who were working with them almost night and day to get ready for the flight were Staff Sgt. Thomas B. Vinson, Sgt. Roy H. Coulter, Corporal Harvid Saeger and Pvt. 1st Cl. Jack Mathews.

First Lieut. Paul H. Kemmer, who piloted the fourth B-12 when this flight left Hamilton Field, had not yet landed at Selfridge Field, according to a letter from Captain Hamilton. He writes that from Sunny California, where it seldom freezes, to an ever frosty mercury hovering from one to 15 degrees above zero Fahrenheit in Michigan is quite a contrast, and makes one appreciate California weather.

Polar bears painted upon the skis, which look like battleships, seem to be chasing Jiggs (the 11th Bombardment insignia) is the description given the B-12, equipped for the cold weather flight, by Captain Hamilton.

---oOo---

NOTES FROM AIR CORPS FIELDS

Hamilton Field, Calif., February 5th.

Hamilton Field was host to 300 Junior Birdmen from San Francisco. They were shown exhibits of a technical nature within the hangars and were taken for a tour of the post by Lieuts. J.G. Moore and E.H. Beebe.

First Lieut. Emery S. Wetzel left this station for service in the Hawaiian Department.

Capt. Junius P. Smith, M.C., reported for duty after a tour of service at Luke Field.

Pvts. Holly B. Ivey, 11th Bomb. Sqdn., and Oscar S. Wagner, 70th Service Squadron, were ordered to Crissy Field for examination for appointment as flying cadets.

Flying Cadet Henry R. Spicer, attached to the 31st Bomb. Sqdn., was transferred to the 17th Pursuit Group, March Field, Calif.

Staff Sgt. Robert F. Summer was assigned to the 9th Bomb. Sqdn. as replacement for Staff Sgt. James R. Knowles, who departed for service in the Hawaiian Department.

1st Lieut. Stanley J. Reilly took up his duties as Post Chaplain recently.

Staff Sgt. Albert W. Dukes was transferred to the Panama Canal Zone, and Staff Sgt. John F. Moran arrived from the Philippines. Sgt. Marion T. Matlock arrived from the Canal Zone.

Master Sgt. Thomas F. Randle, a member of Gen. Pershing's Punitive Expedition and of the Air Corps since 1916, reenlisted in the 31st Bomb. Squadron, January 5th.

Second Lieut. Edward W. Suarez was transferred from the 11th to the 31st Bomb. Sqdn.

Capt. John M. Davies relieved Major Fabian L. Pratt, M.C., as the senior officer on the Aircraft Classification Committee.

Major Robert C. Murphy, Flight Surgeon, recently addressed the Lions' Club at Petaluma on the subject of "Aviation Medicine."

Mrs. Devereux M. Myers, wife of Capt. Myers, was severely injured in an automobile accident and is confined at Letterman Hospital.

Forced by engine failure to land his PT-3 plane in a swampy area on the Vallejo cutoff, 2nd Lt. Richard T. King, 9th Bomb. Sqdn., escaped uninjured though badly plastered with mud. The plane was returned to the field for repairs.

Flying Cadet Lewis L. Mundell ground looped a PT-3A at Crissy Field and dashed into a sea wall. Although shaken, neither he nor Staff Sgt. Ernest Levesque was injured.

In spite of lack of training facilities at the field, a basketball quintet has been pointed by 2d Lt. Joel L. Crouch, Air Res., which has out-tossed all of the service and civilian teams hereabouts. Second Lieut. Duncan J. Powers, Air Res., has also groomed a quintet in the 31st Bomb. Sqdn., which is entering the Marin County League. Inter-Squadron basketball will be scheduled as soon as a basketball floor is secured at the field.

Although handicapped by having only an average of three PT-3A planes available for daily flight, the 26 pilots of the 31st Bomb. Sqdn., both assigned and attached, amassed an average of 13 hours and 33 minutes per pilot, making a grand total of 309 hours and 40 min-

utes of pilot time for the Squadron during the month of January.

Capt. Arthur G. Hamilton, 2nd Lt. Edward W. Suarez, Sgts. Roy H. Coulter, Ludwig Kurrle, Cpls. Harvid Saeger and Raymond J. Elliott, 11th Bomb. Sqdn., departed Jan. 21st for Wright Field for installation of equipment in B-12 planes to be used in the cold weather test flights to be conducted in the north central part of the United States.

Air Corps Detachment, Fort Lewis, Wash.

Looks like it's going to be a busy season, what with gunnery camp at Ilwaco, Wash., at least two weeks in March, concentration of ground troops of the Third Division at Fort Lewis in May, and plenty of cooperative work before, after and between these periods. The weather is breaking pretty good this year. We've seen the sun four days out of the last fourteen.

Master Sgt. Raymond Stockwell departed on an extended avigation flight to Albany, N.Y., accompanied by Staff Sgt. Martin Brucher, and is returning via San Antonio and the Southern route.

Other extended flights were made by Lieut. Everett S. Davis to Chanute Field and return, accompanied by Pvt. John D. McDonough, who joined the class in Paper Work and Administration at the Technical School, and by Lieut. D.W. Titus, with Capt. C. Smith, Cnst. QM, to Los Angeles and return.

35th Division Aviation, Missouri Nat'l Guard.

Seven officers of the 110th Observation Squadron in five airplanes participated in the All-American Air Races at Miami, Fla., Jan. 9th to 13th, inclusive, viz: Major Philip R. Love, Captain Eric H. Kaepfel, 1st Lieuts. Pay H. Kutterer, Clifton C. Hutchison, Winston W. Kratz, 2nd Lieuts. Cleon E. Freeman and Eugene D. Zadontseff.

Randolph Field, Texas, February 4th.

The morale of the Flying Cadets has taken a decided upturn since the publication of the order for examination of flying cadets with a view to their appointment as officers in the Air Corps. Now they really have something to look forward to.

Last October the Flying Cadet Detachment installed four bowling alleys in the basement of the Cadet Administration Building. They are one of the sources of popular interest among the personnel of the field.

Four Bowling Leagues were organized, an officers league of five teams, an enlisted men's league of seven teams, the 53rd Squadron league of four teams, and the student-officer-flying cadet league of seven teams.

In the Officers League, Headquarters leads with 24 victories and 4 defeats; Flying Cadets hold second place, with 11 wins and 13 losses; followed by "B" Stage, won 12, lost 16; Student Officers, won 10, lost 14, and "A" Stage, won 7, lost 17.

Lieut. Hawkins' high single of 266, Cadet Dunlap's 621 triple, and Headquarters 2580 team set are the high lights of the league so far.

Barksdale Field, La., February 1st.

The Inter-Squadron basketball season at the field came to a spectacular close on January 28th, with a decisive victory by the 77th over the runner-up, the 79th. This marks the second Group Championship for the 77th Cagers in the last three years, they having won the Cup in 1933.

High point honors for the season goes to Pvt. Knotts of the 77th, with 129. With the material developed during the Squadron Tournament, prospects for a winning Post Team seem good. The Barksdale Field Basketeers will face a tough schedule for the 1935 season, meeting the leading teams of the south and southwest, such as the U.S. Naval Air Station at Pensacola, Fla.; Texarkana College, Texas; Scott Field, Ill.; Fumble Oilers, Brown Paper Mills, Ft. Crockett, Brooks and Randolph Fields. Lieut. D.C. (Doc) Strother, former West Point cage star, was appointed coach of the Birdmen. He piloted the team in 1934, turning in 14 wins against 6 losses.

The Barksdale Field amateur boxing team ranks among the leading teams in the southwest. The Birdmen boxing team was first organized in July, 1934, Lieut. Earl W. Barnes being appointed team coach. At that time only two of the members of the team had any former glove experience. With two veterans and a wealth of willing young material, Lt. Barnes went to work. In their first show, against the Shreveport Health Club, Barksdale Field scored five wins against two defeats. Since that time the Birdmen fighters have stepped out in fast company and turned in sensational victories.

The Birdmen face a tough schedule for 1935, meeting the Chilocco Indians, Southwestern Louisiana Institute, Shreveport Health Club, Dallas A.C., Louisiana Tech. and Louisiana State University.

Langley Field, Va., February 4th.

36th Pursuit Squadron: Second Lieuts. Edward G. Kiehle, Harold L. Neely, Thomas J. Schofield, James E. Stroud, Edgar M. Witten and George W. Youngerman, Air Reserve, whose extended active duty expired Dec. 31st, were given two additional months' active duty, effective Jan. 2, 1935. Second Lieut. Ralph L. Wassell, Air Reserve, was assigned to this organization January 2nd for a period of six months' active duty.

59th Service Squadron: Athletics form an important part of squadron life after the day's work is done. Our boys managed to clinch second position in the Post Basketball tournament recently completed after ending up with a tie with other contenders. The past football season which gave Langley Field the Third Corps Area championship depended largely upon active support rendered by players from this squadron. Winter practically

limits sports to such games as basketball, just finished, and bowling now in progress.

The 59th Barracks is also the home of the 2d Bombardment Group Headquarters and 2nd Photo Section Detachments. A cafeteria system of mess is operated. Day Room, Recreation Room, Barber and Tailor Shops are also contained in the barracks for the convenience of the men.

Rockwell Field, Coronado, Calif., Feb. 5th.

The Engineering Section of the Rockwell Air Depot is still busily engaged in the priority work of making changes in the Martin Bombers. Four of these were completed and left this station for cold weather tests in the middle west. Two were equipped with de-icer equipment. Unfortunately, one of the four was put out of commission at El Paso when the landing gear failed just about the time the wheels were put on the ground. That airplane was dismantled and sent here for repairs. At the present time it appears that twelve more B-12's will be flying before the middle of this month.

San Antonio Air Depot, Duncan Field, Tex. Feb. 9.

This Depot enjoyed unusual opportunities during the past month for personal liaison with the Materiel Division, Wright Field, visitors therefrom being Capt. Wm. J. Eanlon, Ployer P. Hill, Lieuts. Clarence S. Irvine, Frank G. Irvin and B.W. Chidlaw.

Other visitors ferrying planes to and from this Depot were Captains Charles J. LaGue, Wellman and Royal and Lieut. Vaughn, 45th Div. Aviation, Colorado National Guard; Capt. W.B. McCoy, Instructor, Tenn. National Guard; Capt. Charles A. Horn, Instructor, Arkansas National Guard; Lieut. Robert W. Harper, Chanute Field, and Lieut. Benj. S. Harrell, Air Reserve, from Langley Field.

Messrs. H.R. Adams and F.E. Tugwell, of the Assembly & Repair Department of the Naval Air Station, Pensacola, Fla., were recent visitors here for a few days' inspection of our Engineering Shops in the course of a tour of the more important military and commercial engineering establishments of the country. This was one of several visits made by Navy Department personnel from time to time in the past, and such visits afforded splendid opportunities for interchange and broadening of ideas in aviation matters between the two arms of national defense.

Brooks Field, San Antonio, Texas, Feb. 7th.

Captain Calvin E. Giffin, 1st Lieuts. Reuben Kyle, Jr., Isaac W. Ott, D.F. Stace, Staff Sgts. Cayus P. Peterson, John Murphy, Williamson, and Corp. James S. Pollock are participating in the Cold Weather Test at Mt. Clemens, Mich. So far, no frozen ears have been reported, although many pocketbooks are said to have been frostbitten. Lieut. Ott was ordered to Panama, to sail in June.

Major Charles B. Oldfield, 1st Lieut. Milton J. Smith and 2nd Lieut. Samuel O. Redetzke are attending the Navigation School now being con-

V-6725, A.C.

ducted at Rockwell Field.

Major Henry J.F. Miller, Air Officer, 6th Corps Area, formerly Executive Officer of Brooks Field, is spending leave in San Antonio, utilizing a good bit of his time renewing friendships at the field and collecting a few bets on golf. Major and Mrs. Miller were among the most popular of Brooks Field personnel and their visits are always welcomed by their many friends throughout the 8th Corps Area.

A widely popular sport at the field, and one which has come to occupy importantly that sometimes monotonous interval following Sunday services and noontime luncheon, is Skeet Shooting. The Post possesses an excellent range, and those participating include most every officer and his lady of the Field. In fact, the popularity of this well liked pastime can be noted in the varying ages of those indulging, ranging from 8 to 65. At the first opportunity, a match is to be concluded between Brooks Field and Fort Crockett.

Flight B, 16th Obs. Sqdn., Ft. Leavenworth.

Construction was started on a paved road from the Engineers Bridge to the field proper. This will mark the end of conveying supplies and personnel over a dirt road which at times was almost impassable. All of the above mentioned projects are being constructed from funds allotted under the Federal Reconstruction Program.

During the past few months the flying field has been enlarged and improved to a considerable extent. The field is closed for night operation and a large part of the landing area is closed. It is anticipated that this station will be completely opened for aerial traffic by next June.

The entire complement of new motor vehicles has been received and they were certainly welcomed, as our old vehicles were on their last lap.

After ferrying an O-25C to the Fairfield Air Depot for overhaul, Major Rosenham Beam took delivery of one equipped for instrument flying. We were anxious to receive this plane and expect to perform a considerable amount of instrument flying during the present year.

43rd Division Aviation, Conn. National Guard.

Although their plans were rudely upset by the snow and fog, several members of the 118th Observation Squadron, Conn. N.G., flew to the Air Races at Miami, Fla., as a part of their aviation training. Lieut. Mallette and Sgt. Young departed from Hartford on Jan. 6th, landing at Bolling Field to refuel. After scrutinizing the weather reports, they immediately decided to spend some time in the Nation's Capital, and it was late on Thursday, Jan. 10th, before they were able to leave for Fort Bragg, where they spent the night in the old hospital with some 200 other members of the Air Corps who were likewise bound for Miami. It is reported that the

early arrivals, as they lay in bed, were afforded a great deal of amusement by those who came later in their efforts to find a bunk. It seems that this process involved the use of a flickering candle, accompanied by the sound of muttered curses from those barking their shins. Lieut. Mallette and Sgt. Young flew on to Miami the following day.

Their departure, planned for Monday, being delayed, Capt. Generous with Sgt. Russell as passenger, and Lieut. Merrick, Regular Army Instructor, with Capt. R.G. Sherman, Infantry Instructor with the 169th Infantry, Conn. N.G. as passenger, left Brainard Field on Thursday and arrived at Pope Field that evening, continuing to Miami the following day.

The return trip to Hartford from Miami was made on January 15th without incident, save that Lieut. Mallette remained overnight at Bolling Field. The radios in the other ships enabled the pilots to secure the latest weather reports from the Department of Commerce stations, which aided them very materially in their flight.

All reports are that the sunshine of Florida and the hospitality of her citizens were most plentiful; that the Selfridge Field men flew some beautiful formations, and that the entire trip was a pleasant success.

45th Division Aviation, Lowry Field, Denver, Colo.

We now have all but three of our O-19E airplanes, and expect to receive these in the near future. Most of the officers are pleased with the performance of the O-19's, but are still desirous of having more room in the pilot's cockpit and less contortion in the reading of the gasoline gauge.

The announcement of appointments in the Army with permanent commissions has created some excitement in our Squadron. Lady Fortune will probably shine for some of the National Guard officers. This depression has made a permanent commission look very attractive to most of us.

Bolling Field, D.C., February 12th.

A fire occurred at Bolling Field at about 10:30 a.m. on February 6th, completely destroying Hangar No. 6, which was used by the Department of Commerce. The fire apparently originated from a short circuit caused in the radio equipment in one of the airplanes stored in the hangar. Three airplanes were destroyed and quite a lot of valuable equipment. Due to the prompt and energetic effort on the part of the Bolling Field Fire Department, and the Fire Departments of Washington, the fire was confined to the hangar in which it originated.

First Lieut. H.K. Baisley, pilot, accompanied by Capt. G.G. Lundberg, departed Jan. 29th on an extended flight to Los Angeles, Calif., returning to the field on February 10th.

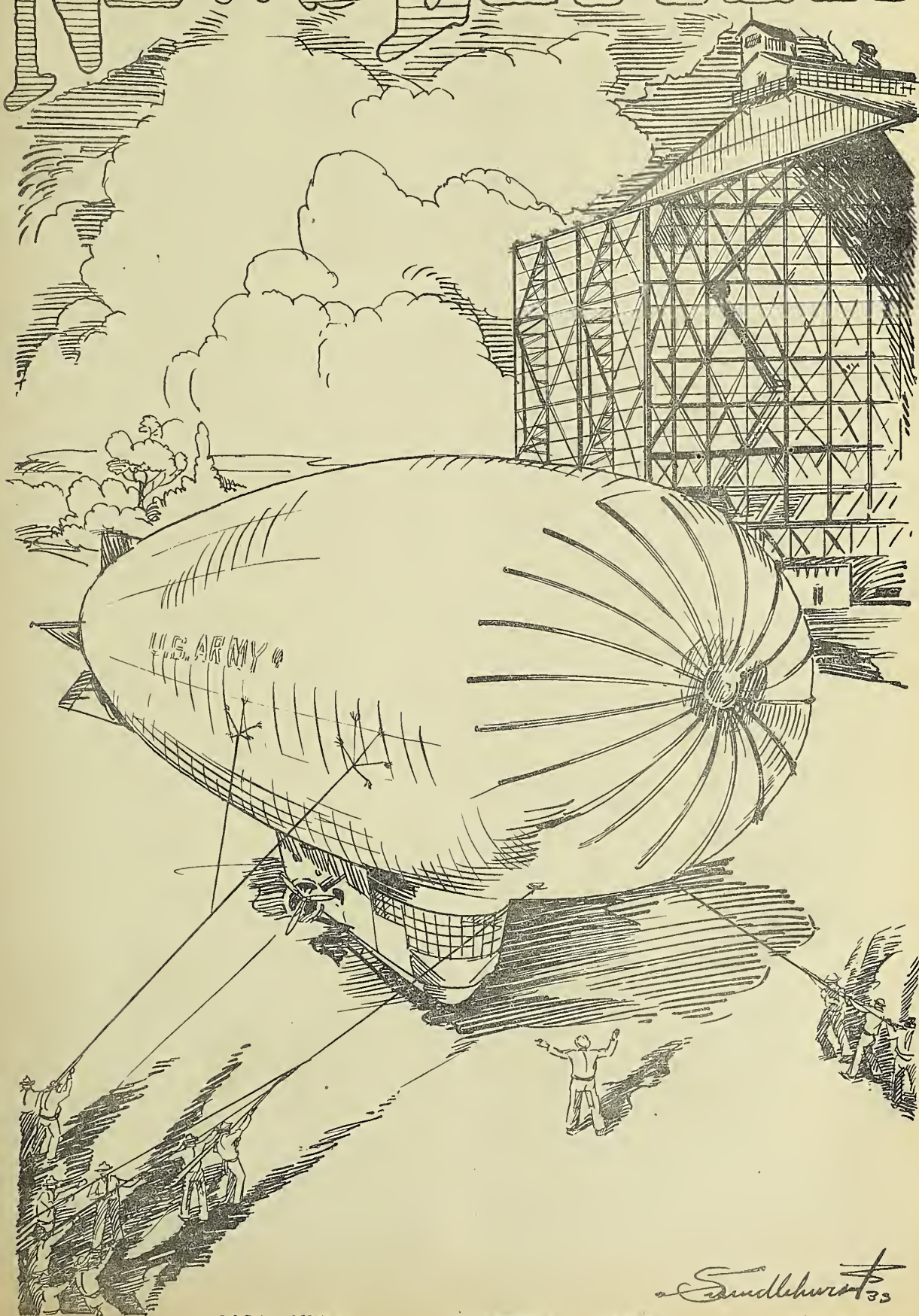
Among visiting pilots last month was Lieut. McKiernan, accompanied by four officers of the New Jersey National Guard from Newark, who landed in sub-zero weather after a sojourn at Miami, Fla. All were complaining of sunburned backs.

SOME OF THE MORE INTERESTING BOOKS AND DOCUMENTS
RECENTLY ADDED TO THE
AIR CORPS LIBRARY

Available for loan to Air Corps Organizations only upon request to the
Air Corps Library, Munitions Bldg., Washington, D.C.

- A 00.51 45- U.S. American Embassy, Moscow, Russia. Provisional regulation for the use of foreign military aircraft visiting the air space and territory of the Union of Socialist Soviet Republics. Wash. May 13, 1934. Caption title, 7f. 33cm. Tr. by M.I.D. from Enclosure No. 1 to dispatch No. 239 of Nov. 3, 1934, from the American Embassy, Moscow.
- A 40.3/34 Guyot. A new device for rapid calculation of the astronomical position of aircraft. Wash. Sept. 1934. caption title, 19f. 33cm. Tr. B-8292. Tr. by M.I.D. from L'Aeronautique, Sept. 1934.
- A 81/52 Junior Birdmen of America. Army aircraft insignia. N.Y. nd. 23p. incl. illus. 23cm. (Junior Birdmen Library Series. Handbook No. 5.)
- B 63/8 Flamme. The unusual fatigue due to the operation of aircraft; diseases which may result therefrom considered as occupational accidents covered by the law of March 31, 1928. Wash. Jan. 29, 1935. caption title, 35f. 33cm. Tr. by M.I.D. from the French.
- D 00.113 54 Beyne, M.J. Disorders occasioned in the human organism by flight at high altitudes, causes, mechanism, defenses. Wash. 1934. caption title, 29f. 33cm. Tr. by M.I.D. from Annales de physiologie et de physicochimie biologique, vol. X No. 3, 1934.
- D 12.1/14 France. Ministry of commerce and industry. Bureau of industrial property. Pyrometric lamp. Wash. Jan. 26, 1932. caption title, 3f. 33cm. Tr. by M.I.D. from French letter of patent.
- D 52.1/Far- man/1 Societe des avions H.-M. & D. Farman. Farman. Billancourt (Seine), nd. cover title, 48p. incl. illus. 27½ cm. Takes up Farman 355, 202, 400, 390, 360, 356.
- D 52.5/18 Panetti, Modesti. Problema dell'atterraggio con carrelli a reazione combinata elastica e dissipatrice. Torino, 1934. 17 p. incl. diagrs. 24½ cm. English title: Problems of landing gear combining the reaction of an elastic device and a brake.
- D 62/7 France. National Office of Industrial property. Map arrangement of folding plan. Wash. 1934. caption title, 6f. 33cm. Tr. by M.I.D. from the French.
- 629.13 Un3ac No. 198 U.S. National Advisory Committee for Aeronautics. Kay 331 gyroplane (British); all-metal single-seat light rotor plane. Wash. Jan. 1935. cover title, 6p. 2f. incl. illus. diagrs. 26½cm. (U.S. National Advisory Committee for Aeronautics. Aircraft Circular 198.)

NEWS LETTER



Samuel H. H. 33

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

REORGANIZATION OF THE AIR CORPS IN THE UNITED STATES INCIDENT TO THE ORGANIZATION OF THE G.H.Q. AIR FORCE

Instructions have just been issued by the War Department, effective March 1st, governing the reorganization of the Air Corps within the continental limits of the United States in connection with the organization of the General Headquarters Air Force.

Under the heading of control and jurisdiction, the instructions provide that the Office of the Chief of the Air Corps, the Materiel Division (including Air Corps Depots) and the stations, installations and units (assigned or attached) of Air Corps Special Service Schools remain under the jurisdiction of the Chief of the Air Corps.

All Air Corps stations, station complements, photo sections, Corps and Army observation units and Corps Area detachments, except those noted in the preceding paragraph, remain under the jurisdiction of Corps Area Commanders concerned.

All units of the G.H.Q. Air Force are assigned to the control of the G.H.Q. Air Force Commander.

The War Department has issued a station list, showing the location of the various activities under the jurisdiction of the Chief of the Air Corps and the stations of the various units under the control of the G.H.Q. Air Force Commander. This list will be distributed to all Air Corps activities in due course of time.

In the assignment of Regular Army Air Corps officers to station complements, Barksdale and Langley Fields will receive 11 each, and Bolling, Brooks, Hamilton, March, Mitchel, Rockwell, Scott and Selfridge Fields, 8 each. Officers of other branches who are assigned to duty at any of these Air Corps stations as Quartermaster, Surgeon, etc., will be part of the station complement at that station. The Air Corps officers in the station complement will be entitled to the temporary grades indicated in Circular No. 7, War Department, dated January 25, 1935. The remaining officers at a station will be available for assignment to combat units, service squadrons and photo sections organized thereat.

At the earliest practicable date after March 1st, a total of 15 enlisted men, including 2 Technical Sergeants, 1 Staff Sergeant, 4 Sergeants, 4 Pri-

vates, 1st Class, and 4 Privates, among whom one holds a 1st Class Specialist rating; one, 3rd Class, and six, 6th Class, will be transported by air from Randolph Field to Maxwell Field. Upon arrival at the latter station, these men will be assigned to the Air Corps Tactical School Detachment, or units attached to the Air Corps Tactical School, as directed by its Commandant.

A total of 75 enlisted men, including 12 Sergeants, 12 Corporals, 40 Privates, 1st Class, and 11 Privates, among whom 26 hold Specialist Ratings, viz: eight, 2nd Class; six, 3rd Class; 3 each, 4th and 5th Classes, and six, 6th Class, will be transported by air from Barksdale Field to Maxwell Field, to be assigned to duty as indicated in the preceding paragraph with respect to the enlisted men arriving from Randolph Field.

The Headquarters G.H.Q. Air Force and Headquarters Squadron, G.H.Q. Air Force, consisting of 2 Master Sergeants, 1 First Sergeant, 4 Technical Sergeants, 8 Staff Sergeants, 7 Sergeants, 7 Corporals, 18 each Privates, 1st Class, and Privates, total 65, included among whom will be 7 air mechanics, will be consolidated into Headquarters and Headquarters Squadron, G.H.Q. Air Force, and will proceed by rail on or about March 1, 1935, from Bolling Field to Langley Field. Included among these 65 men are 23 holding Specialists' ratings, as follows: one, 1st Class; three, 2nd Class; five, 3rd Class; one, 4th Class; two, 5th Class, and eleven, 6th Class.

Service Squadrons are charged with establishing and operating messes for combat units when these units are operating at their own stations, and, when possible, in the field. Mess personnel assigned to combat squadrons will be detached to service squadrons for this purpose. During maneuvers away from their home stations and when unaccompanied by service squadron personnel, or when established messes are not available, combat units will establish and operate their own messes.

Service Squadrons and station complements will each establish and operate their own messes. At stations where consolidated messes are in operation on account of restrictions due to lack of suitable construction, the station complement, assisted by the necessary de-

detachments from the combat and service squadrons, will operate the mess. These provisions will apply only when the combat and/or service squadrons are at their home stations.

The detachment of enlisted men or officers from Air Force units to special duty of any kind, connected with the internal administration of a post, will

---oOo---

GENERAL WESTOVER RETURNS FROM INSPECTION FLIGHT IN THE NORTHWEST

Brig.-General Oscar Westover, Assistant Chief of the Air Corps, on January 11th left Washington on an extended cross-country flight, arriving at Pearson Field, Vancouver Barracks, Wash. January 14th.

While in the Northwest, General Westover inspected from the air, and in many cases on the ground, 81 airports and proposed sites for airports or air bases. Marked progress in building and improving airports was found to have been made since his last visit to the Northwest at the time he conducted air force command post exercises there in June, 1933.

General Westover conferred with the governors of Washington and Oregon, as well as their advisors, on airport development. At the request of Governor Martin, of Washington, General Westover furnished to Mr. Lacey V. Murrow, State Director of Highways, his comments upon a proposed State bill directed to the improved administration of State air-

---oOo---

OFFICER REWARDED FOR HEROISM

Capt. Sargent P. Huff, Ord. Dept., stationed at Rockwell Field, Calif., was recently awarded the Soldier's Medal for heroism displayed by him August 28, 1934. In the afternoon of that day he was lying on the beach at Rockwell Field watching his own children playing in the surf with other children of the post. A sudden scream of "Help" from 11-year old Bobby Archer brought him suddenly to his feet. Observing that the boy was caught in a rip tide and be-

---oOo---

FOREIGN AIRPLANE DEVELOPMENT

Mr. John J. Ide, Technical Assistant in Paris, France, of the National Advisory Committee for Aeronautics, recently addressed Materiel Division personnel at Wright Field, O., on the subject of Foreign Airplane Development. Mr. Ide stressed the influence on foreign transport aviation during 1934 of the high speeds attained by American transport airplanes, pointing out that, since it was considered abroad that aerodynamically the design of the airplane has been improved as far as possible, concentration had been bent upon raising the efficiency of power plants. From his de-

be made only with the approval of the tactical commanders concerned.

Air Corps personnel, who are assigned to the station complement and who are on flying status, will be attached for flying training by the station commander to the tactical unit recommended by the tactical commander.

ports. General Westover found that in both States a considerable number of new airports and landing fields are under construction or projected, and that in each State the Emergency Relief Administrations, the State Board of Aeronautics, and the various Chambers of Commerce are cooperating to advance the program.

Another major purpose of General Westover's visit to the Northwest was the transaction of business of his office as Director of Aircraft Production, in connection with the affairs of the Spruce Production Corporation.

The return trip to Bolling Field included stops at Hamilton, Crissy, Rockwell, Clover and March Fields. From March Field the Southern Airways was followed, via Tucson and El Paso to Barksdale Field, Maxwell Field, and Candler Field, Atlanta, Ga.

Upon returning to Washington, General Westover made a full report of his trip to the War Department.

ing carried out to sea, Capt. Huff, with utter disregard of his own safety, swam into the rip tide and, with great difficulty, succeeded in bringing the boy safely to shore, saving his life.

"Captain Huff well deserves the honor that has been bestowed upon him," says the Rockwell Field Correspondent. "His courage and ability will long be gratefully remembered by Lieut. and Mrs. C. E. Archer, parents of the youngster he saved."

---oOo---

scription of airplanes shown at the Paris Exhibition this concentration had evidently borne fruit, for scarcely a speed of less than 200 m.p.h. was mentioned in connection with them. Some of these were computed speeds, however.

Of interest was the fact that in many of the advanced engines power plant development had been greatly advanced after the engine was placed in service, the conclusion reached being that if the services were willing to worry along with their "teething troubles," quicker progress was made in the development in an airplane than on the test stand.

Except in Germany, Mr. Ide said, no

V-6723, A.C.

great progress had been made with the heavy oil engines. Replacement of bi-planes by monoplanes, principally the low wing monoplane, and the general adoption of metal construction are reflections of tendencies that we have

---oOo---

20TH PURSUIT GROUP GOES "ON THE AIR."

The 20th Pursuit Group, stationed at Barksdale Field, La., performed their part in officially opening National Defense Week in Shreveport. Through arrangements made with a local broadcasting station, KRMD, the Group was "on the air" for 15 minutes at high noon on Tuesday, February 12th.

Maneuvering close to Shreveport, the commands of Major Harmon, Group Commander, were picked up and rebroadcasted to

---oOo---

noted in our own development. Mr. Ide illustrated his talk with slides.

Captain D.M. Reeves, Chief of the Technical Data Section of the Materiel Division, introduced the lecturer.

the listening public in and around Shreveport. A low bank of clouds partly obscured at times the group of 33 airplanes, but the noise made by dives was plainly audible to all listeners. A special weather broadcast by the Group Communications Officer while the Group was "above the clouds" proved very interesting to the public. This being the first rebroadcast of its kind near Shreveport, it proved a huge success.

BOMBARDMENT WING RETURNS FROM FIELD MANEUVERS

By the Langley Field Correspondent

The 2nd Bombardment Wing, Langley Field, Va., Major B.Q. Jones, Commanding, returned to its home station on February 4th, after 27 days of field maneuvers in the 4th Corps Area. Participating in these maneuvers were 93 Air Corps officers (pilots), 2 Flight Surgeons, 19 Flying Cadets and 241 enlisted men. The 81 airplanes utilized included 44 Pursuit, 29 Bombardment and 8 Transports. The ground echelon used 42 trucks of the $\frac{1}{2}$ and $1\frac{1}{2}$ -ton class and an ambulance.

Due to the shortage of airplanes, the Wing was organized for the maneuvers as two groups of two squadrons each, in accordance with the Tables of Organization proposed by the Andrews' Board, but it was increased in the matter of personnel due to the requirements for truck drivers and to the further fact that the Wing completely took care of itself without the aid of Service Squadrons. Concentrations and unit movements to concentration were made on this organizational status. Tactical and combat maneuvers were flown as two air forces. Each air force consisted of one Pursuit Squadron and one Bombardment Squadron. In combat exercises, decentralization of units was practiced wherever practicable and contact was maintained by radio between the Wing Commander and his units.

The flight (2 elements of 3 planes each) operated as the basic tactical unit; the squadron as the basic administrative and tactical unit; the group as the basic supply, administrative and tactical unit; the Wing as the major tactical command. The Group Commanders and staffs directed the tactical employment and administered to the needs of their composite groups (half Pursuit and half Bombardment) in

their respective combat sectors. The Wing Commander and Staff functioned as the superior headquarters in the theatre of operations.

A total of 16 independent Air Corps camps were made; 3753 hours were flown, 3315 convoy road miles and 2675 air line miles were covered in Wing movements.

A ground radio net between the Wing and Group headquarters and between the Wing and the Air Corps net through Maxwell Field was satisfactorily maintained by using SCR-187 sets installed in airplanes with improvised power furnished while on the ground by portable gasoline-driven units.

The purpose of the maneuvers was manifold, - to test whether an Air Corps combat unit could operate in the field, constantly changing its theatre of operations; take care of itself; supply itself by air transportation (including rations and Air Corps supplies) and evacuate its sick. In fact, all the related functions of field operations were tested. The present field equipment of the Wing was tested under war conditions. The Wing was tested as a combat unit under varying conditions of terrain and weather.

On January 9th, the 2nd Bombardment Wing began its movement by groups from Langley Field, Va., to the concentration point on the Pan-American Airport at Miami, Fla. Delayed by fog, the Wing completed its concentration on January 11th.

At Miami, the Wing was divided into two opposing air forces and plans were made for war to begin in the first theatre of operations. The front line was designated as an east-west line through Tampa, and the two opposing air force commanders were permitted to use,

V-6732, A.C.

and operate from, any airport more than 20 miles from the front line in their respective areas. The Red Air Force, commanded by Captain A.M. Guidera, was south of the front line. Captain Guidera placed his Pursuit Squadron, commanded by Captain H.H. George, and his Air Force Headquarters at Sarasota, Fla., and his Bombardment Squadron, commanded by Captain E.C. Black, at Bradenton, Fla.

The White Air Force, commanded by Major Willis H. Hale, defended the area north of the front line. Major Hale placed his Bombardment Squadron, commanded by Captain R.T. Cronau, and his Air Force Headquarters at Lakeland, Fla., and his Pursuit Squadron, commanded by Captain Rex Stoner, at Auburndale, Fla. All of these airports, with the exception of Lakeland, were typical war time airdromes. The location of the airdromes used by each air force was kept secret.

At 3:00 p.m., January 15th, war was declared, and the two opposing forces went into action. All combat airplanes were equipped with gun cameras. Batteries of ground gun cameras were used as anti-aircraft defenses of the airdromes, and alert Pursuit patrols took off upon the approach of enemy airplanes. Bombing raids and Pursuit fights were occurring continuously day and night throughout three days of battle. It was interesting to note that the newspapers of Sarasota and Bradenton were intensely pro Red and those of Lake City and Auburndale intensely pro White. On January 17th, peace was declared. The Wing then moved to Tampa, where the 20-hour check was made and the troops given a day of rest from the strenuous duties of the past week.

On January 20th, the Wing again became two opposing air forces and the front line extended from Madison, Fla., to Drifton, Fla. The Red Force commander placed his air force at Lake City, Fla., and the White Air Force commander concentrated at Valdosta, Ga. Each air force kept Pursuit patrols on the lines from daylight until dusk each day. In raids across enemy airdromes and strategic centers, all planes were required to cross the designated front lines. After three days of warfare in this locality, the Wing concentrated at Mobile, Ala., for a 40-hour check.

Before leaving the Valdosta-Lake City area, the cold wave which struck the United States at that time caused both warring factions intense shivers, and the Sibley stoves were needed for the first time on these maneuvers. The ingenuity of Corporal E.J. Zetwo came to the fore when he was cold and saw several drums of drained engine oil. He took an oil can and attached to it a

metal hose and draincock. This was suspended above the Sibley stove and the oil permitted to flow through a hole in the Sibley stove on to a piece of wood or brick or wire mesh. The drain-cock regulated the flow of oil to give the heat desired. This method was found to be highly successful and soon all stoves were similarly equipped. Other difficulties due to the change in temperature, such as cold weather starting of engines were encountered and means of overcoming them are now the subjects of reports made in connection with the maneuvers.

Upon arrival at Mobile, Ala., it was found that in the freezing weather an efficient performance of the 40-hour inspection could not be made in the open. The type of operations (continued days of intense aerial combat operating out of rough war-time airdromes) necessitated the utmost in the 40-hour check.

Shushan Airport, New Orleans, offered the use of heated hangars, and the Wing moved to New Orleans, where the 40-hour check was accomplished.

On February 1st, war was again declared between the Red and White air forces, with the front lines extending roughly north and south midway between Maxwell Field, Montgomery, Ala., and Fort Benning, Ga. The Red Air Force used the Montgomery Municipal Airport and Maxwell Field, while the White Air Force used Columbus Municipal Airport and Lawson Field. At 3:30 p.m., February 2nd, the Wing Commander declared peace and directed the groups to return to Langley Field.

Sufficient air transport was not available to carry field equipment for all units. One Pursuit Squadron, the 23rd, was partly equipped and moved largely by air. The Bombardment Group carried all essential field equipment by air in their planes. One Pursuit Squadron not equipped with aerial transportation had to rely entirely on its truck convoy. Duplication of equipment and of trucks was necessary in order that, in long jumps, the squadron would have sufficient tentage and equipment for housing while the second set of equipment was being brought to their place of encampment. The day preceding movement of the squadron, the advance echelon of trucks with one complete set of equipment moved to the new location and set up camp. The rear echelon struck camp and moved forward after the squadron departed. This system worked satisfactorily except for the consideration of doubling the amount of equipment needed and the number of men necessary to transport it. This method of leap frogging is thought to be the best way of keeping an Air Corps unit, which is constantly moving, properly supplied with the necessary impedimenta where air transport is not available.

The supply of rations was made by air

from the advanced base at Maxwell Field. All food could have been so drawn and flown to the squadrons in the field. To insure the best possible field messes, however, fresh beef, fresh vegetables and milk were purchased locally.

Only those supplies which had a normal expectancy of being used in a 48-hour period were carried. Requisitions were made for items needed, and upon consolidation were filled at Maxwell Field and returned by the Wing transport planes. Strict accounting of all parts in the crew chiefs' kits and all requisitions were kept for use in preparing tables of necessary supplies for field maneuvers.

The duties of the men and the number of men required were likewise cataloged and a strict accounting was kept of man hours on the various duties involved. These data are now the basis of tentative Tables of Organization for a Wing at minimum strength in the field for the maximum number of airplanes involved.

All the cities at which the Wing or units thereof concentrated were extremely hospitable to the "Visiting Firemen." Courtesy cards to Country Clubs, Yacht Clubs, Athletic Clubs, etc., invitations to parties, dances and receptions were showered upon the Wing personnel.

The personnel of the 2nd Wing are to be congratulated on their performance. They flew a month of intensive combat maneuvers over various types of terrain under various weather conditions out of airports that compared with those of war. With 3753 flying hours of this type of training, not a single serious accident occurred, and no fatalities or injuries of even a minor nature were involved. There was only one forced landing and that, fortunately, over an airdrome.

Major Jones and his staff are now engaged in comparing the gun camera films and combat reports of each contact of the opposing air forces. The winning air force and the individual field exercise aces will be announced shortly.

---030---

WASHINGTON NATIONAL GUARD AIR CORPS IS UP AND DOING

Felts Field, Spokane, Washington, the station of the 41st Division Aviation of the National Guard of that State, is the most northwestern Air Corps station in the United States.

In his first contribution to the News Letter, the Correspondent starts off by saying that it is a "Million Mile Cross-Country" flying organization, with the finest military hangar in the country. He backs up this statement with statistics which show that between July, 1934, and January 15, 1935, pilots of the 41st Division Aviation piled up more than 1,000,000 miles in cross-country and Weather Bureau flights, in addition to regular Sunday training schedules.

Touching on the hangar, he says:

"Taking an early advantage of the President Roosevelt public works program, officers and friends of the Division Aviation launched an active campaign that resulted in the construction of a \$102,000 brick and tile hangar, with 20,000 square feet of floor space.

Designed to match the present administration building, the new hangar is constructed of rough face artistic brick. Although a difficult problem was presented in the roof design, there are no posts, or other roof supporting members on the floor of the hangar. The roof truss is of a bridge design sufficiently sturdy to carry the 20,000 square feet of roof that is sometimes covered with snow. It is the largest truss of its kind in the Northwest.

The interior finish is of tile, with a specially prepared light red stainless floor. A traveling crane hoists heavy and bulky freight shipments to the store room and parachute balconies,

and makes the changing of motors easy. There are a series of floor lights for night mechanical work.

Large electric doors, 25 x 180 feet, travel on tracks on the field side of the hangar, making it possible to move a particular airplane to the field without moving other ships. In front of these doors is a concrete apron 100 x 200 feet, with a concrete taxi-way to the field. A separate gas and oil house is at the east end of the hangar, which is heated with oil.

Numerous Regular Army Air Corps officials, visiting Felts Field, have declared the hangar to be the finest they have ever inspected."

Reverting to the subject of flying, the News Letter Correspondent says that, flying across the newly established Northern Transcontinental Airway, and returning via the central route, three Douglas O-38E's flew 243 hours and 15 minutes on the trip. Commanding the flight was Major Robin A. Day, Regular Army Instructor; Captains Claude Owen, Robert Owen, Lieuts. Hillford R. Wallace, Ellsworth C. French and Sergeant Bill Finch.

On the flight to Florida were five ships, totalling 377 hours and 55 minutes flying time. More than 8,700 miles were covered on this trip. Returning north from the "Sunny South," the flight encountered sub-zero weather that made it difficult to start the motors at Reading, Calif., where the ships stood out all night.

On this flight were Major Day, Captains Claude Owen and L. Walters, Lieuts. Enier Malstrom, Dale S. Swartz and Carl Schirmer, and Sergeants Benscotton, Hansen and Erickson.

REPORT OF FEDERAL AVIATION COMMISSION (Continued)

With respect to the recommendation that there should be closer coordination of Army and Navy experimental and development work, and that the National Advisory Committee for Aeronautics should be more largely used as an agency for such coordination, the Federal Aviation Commission states that if the experimental procurement programs of the air arms of the Army and Navy are to be expanded, the interest of economy obviously requires the closest coordination of plan and practice between the two services.

It seems important that the agencies of coordination now in existence should be strengthened, and that the definite allocation of a particular undertaking to one Service or the other, to be carried on in the interest of both, should be a common rule.

Suggestion is made that increased use be made of the facilities of the National Advisory Committee for Aeronautics, if necessary through the formation of sub-committees of technically expert representatives of the various government departments interested and with all non-governmental members excluded. Where work such as the development of high-powered engines or the study of new types of aircraft structure is to be carried on, the laboratories of the National Advisory Committee always and necessarily play a large part in the preparatory research. The general program of aeronautical development to be carried on by the Army and Navy ought to be planned as a whole and its parts allocated with the participation of selected National Advisory Committee personnel and perhaps of other interested governmental agencies.

While the Services are perfecting improved means of coordinating the developmental work, it would seem well for them to perfect also closer agreements upon many matters of technical detail where present differences of practice appear unnecessary and irritating. The attention of the Commission was called to many instances of differences of practice between the Army and Navy in the checking of aircraft designs, in the specifications for standard materials, and other kindred matters. In the particular case of analyzing an aircraft structure for strength the Army, Navy, and Department of Commerce now require not only different factors of safety but totally different methods of calculation. The manufacturer who wishes to build aircraft for both Services and for the commercial market must either maintain three separate engineering staffs or train one staff in the application of three alternative methods. The Army and Navy have held joint conferences on some of these mat-

ters for a number of years and much progress has been made, especially in standardizing specifications for materials. While it is not desired to belittle what has already been done, the hope is expressed that much more can be accomplished in the future. The arrival at an inter-Service agreement on every possible point should be regarded as a major responsibility of all the personnel concerned.

In recommending the temporary attachment of a few officers of the Army and of the Navy to civil activities, and especially to air transport, the Commission states that the experience of the past winter furnished a forceful evidence of the generally incomplete comprehension by military personnel of the nature and quality of present air transport operations. Though there is a fundamental difference between transport and military flying, and hence they should be kept quite separate in administration, the experience of the transport lines in maintaining regular operation against all manner of difficulties contains a great many lessons useful for the military and naval Services.

It has been suggested that the Army and Navy should take advantage of transport experience by periodic assignment to actual places in transport organizations. It has been specifically proposed that Army and Navy pilots serve as co-pilots on air lines. That appears so undesirable from both civil and military points of view as to be virtually unworkable. If transport flying is to command public confidence it must have an integrated personnel under a unified discipline. The pilot must know the co-pilot and learn to trust him. The co-pilot has a variety of duties about the plane which have nothing to do with the actual operation of the controls, and for which he requires special training quite apart from that given him as a prospective first pilot. It is found inconceivable that officers of the Army and Navy could be fitted into these places without general loss of efficiency and wreckage of the morale of all hands.

It seems preferable and distinctly desirable that selected officers with special equipment for the work should be assigned to make study of special phases of transport operation. Such studies should be extended to cover other civil activities of possible military interest, such as those of the major flying schools. It ought to be of marked advantage to detail half a dozen experienced engineering officers from each Service to devote a few months to an intensive study of air line maintenance bases and their methods. A limited number of officers might properly fly

as guest pilots on transport lines, but officially taking their places in the plane as passengers, and changing places with the co-pilot at intervals during flight. It would naturally become the obligation of the officers who had been assigned to any such study to give the Service the benefit of their experience by memoranda discussing particular phases of civil flying from the Service point of view and stressing whatever they might have discovered that was new and possibly useful to the Service, and by lectures at Service schools. There are so many specialties in which Army and Navy air officers might be well trained and so many subjects of which special study by selected groups would be profitable, that there ought to be particular interest in anything that can be done to improve the machinery whereby special knowledge gained by a handful of officers can be disseminated throughout the entire Service as a leaven.

In making the recommendation that the War and Navy Departments should make reasonable use of facilities of civil aircraft repair stations for repair and service work on military and naval aircraft, the Commission believes that military aviation would gain from a closer association with civil aviation enterprises and a larger use of their facilities. The Commission was informed that it has been the uniform practice of the Army and Navy, except in extraordinary emergency, to depend entirely upon their own facilities for aircraft repair and overhauling work. Each service has certain major depots to which aircraft are flown for overhauling and to which damaged machines are commonly shipped, sometimes over very long distances. The practice of certain European air forces, especially that of Great Britain, of making exclusive use of industrial facilities for overhauling and repair work has not appealed here. It has even been the rule for military aircraft proceeding transcontinentally to keep away from the established commercial airways in order that landings may be made at fields with permanent military installations and that the purchase of any supplies from civilian sources may be avoided.

While this last course certainly produces a certain economy, it seems unfortunate to alienate the Service personnel from an acquaintance with the best equipped airways of the country, of which regular use would unquestionably be made for moving military equipment in the event of war.

While realizing the administrative difficulties, it is felt that it should be possible in many instances to arrange with advantage to have civil service stations, of which there are now 151 approved for quality and periodically

checked by the Department of Commerce, do mechanical work on Service planes and engines. The preponderance of testimony from witnesses at once competent and disinterested seems to be that the quality of the work done by the best civil repair stations is quite in the same class with that of the Army and Navy shops.

Recommending that the maximum term of active service with regular forces on the part of Reserve pilots graduated from the Army and Navy training schools should be increased to at least three years and perhaps further, the Commission points out that another problem common to all military air forces is the unusual form of the promotion curve and the tendency to stagnate promotion. It has been the common experience, at least in the English-speaking countries, that airplanes should be commanded by commissioned officers and that enlisted men should with rare exceptions be used only as second pilots and in limited numbers even in that capacity. As a consequence there is an abnormally large need for officers in the lower ranks in aviation. At the same time it is desirable that such ranks as that of major and lieutenant-colonel be reached by men still young enough to fly actively and well. No system of promotion dependent on seniority will accomplish the two results. In an air force with a straight seniority system, even though there be no war-time-accumulated blocks of personnel to reckon with, officers may expect to reach the rank of major or its equivalent after twenty years or more of service, and then to progress through that rank and those immediately above it with giddy rapidity.

An appropriate selection system can of course produce any sort of relationship of rank to age that may be desired, but it will attain the results desirable in the Air Corps only at the expense of a very drastic elimination of a large proportion of officers below forty years of age, men who entered the Service expecting to find a career there. Whether or not selection is employed, it is understood that it has been the practice of certain European air forces to give short service commissions good for only a limited period, their recipients fully understanding that they must expect to return to civil life at the end of their fixed term. The British system, providing for such commissions good for a maximum of six years and for a possible renewal of five years thereafter, is particularly interesting for comparison with our own in that, like ours, it is not built up in peace time on a conscript basis.

Supplementing the problem common to all air forces, the United States Navy

V-6732, A.C.

has a special one. All the officers commissioned in the regular Navy in peace time come from Annapolis. Experience has shown that the severity of the requirements of aviation are such that only a little over 25 percent of Annapolis graduates can qualify for aviation duty. Since not all those who might be able to qualify actually apply for flight training, and since some who have applied and qualified subsequently withdraw or are removed from aviation because of unfitness, it seems to be impossible to expect that more than twenty percent of the regular officers in any rank at any given time will be fully qualified naval aviators. This is not enough to meet the demands of the Service, which will call, under the new naval program, for 705 aviator lieutenants out of a total of 2,266 officers commissioned in that grade by 1941 if the existing program is carried through.

The only recourse for the Navy then seems to be the short-service commission or its equivalent, and the same device ought to be very helpful in ameliorating the promotion problem in the Army Air Corps. Both the War and Navy Departments accept something of the sort as necessary, at least as a temporary expedient and perhaps as a permanent measure, and representatives of both have indicated their hope that they may be able to take Reserves into the regular Service for a term of several years of active duty. It is understood that a three-year term after graduation from the Service flying schools is now under consideration, and recommendation is made that everything possible be done to facilitate such an arrangement and that whatever new legal authority may be required be extended.

It has been suggested that an even longer term would be desirable to provide for a longer period of really useful service after the officer has had a chance to become a fully effective unit in a squadron. It appears that a longer term might be recommended if it were not for the fear that if reservists remained on active duty for more than three years there would be built up behind them an almost irresistible pressure to enable them to stay there indefinitely. No doubt there would be a strong desire on the part of many of the men who came into the Service in such fashion to make it a permanent career, and it seems to be a fact that the Royal Air Force has experienced just such pressure, but the Commission cannot accept it that it is impossible to enforce rules made by the Services with the authorization of the Congress and definitely announced in advance. The longer the term of service the smaller the number of men that will have to be turned out each year, the more fully trained they will be, and

the better will be their chance of finding employment in civil aviation. "Our own inclination," the Commission asserts, "from what we have been able to learn of this problem, is to look with favor on an authorization for a maximum of as much as four or five years of active duty after graduation from flying school. The typical Reservist would then be returning to civil life, in the number of about 200 per year from each Service, approximately at the age of 28 and with over 1,000 hours of difficult and disciplined flying to his credit.

Though we have no doubt of the possibility of getting plenty of applications for such duty from men excellently qualified to perform it, we feel that to make it more attractive and to do justice to those who embark upon it there should certainly be offered something in the way of a dismissal salary at the end of the period. Though we have no definite recommendation to offer, we have thought in terms of continuing the officer's regular base pay for from six months to a year after his return to civil life to cover the period in which he is re-establishing himself there."

Recommending that the aviation Reserves, both of the Army and Navy, should be materially strengthened and should receive a higher priority than they at present enjoy in the allotment of funds, the Commission states that in war against a major power our air forces would feel an almost instant need for the mobilization of at least twice, and in the Army probably at least three or four times, their regular personnel. The numbers immediately mobilized in full readiness for duty would have to be backed up, in order that military effort could be carried on, by a Reserve of some additional thousands of qualified pilots who could be made ready for full service within a few weeks. As the Commission has studied the present status of the Reserves it has seemed to that body that this problem has been faced on so small a scale as scarcely to constitute more than a working model. The Navy has a total enrolled Reserve of 481 officer pilots, of whom 251 could be considered as ready for immediate duty. The Air Corps lists a total of 3,865 Reserve pilots, of whom 1,450 are classified as Group I and presumably ready for immediate action, but even the Group I pilots have been restricted by shortage of Reserve funds to a maximum of four hours' flying a month and in one year to only two hours a month. Even the present amount of flying time is less than the minimum necessary for real military fitness. The funds for Air Corps Reserve flying operations seem to have been spread so thinly that a large number of men have received a very small amount of flying practice and still less training of a truly military nature. It seems that the first task of the Army

Air Corps in this connection should be to comb over its present lists and select those who are, and are likely for some years to remain, genuinely qualified for active Service flying.

In establishing priorities in a Reserve force, it is taken as self-evident that the most urgent concern must be with the first-line group that stands ready to step directly into tactical organizations on the day of a declaration of war. The Navy has what seems to be an admirable organization of such a reserve in its 31 Fleet Reserve squadrons, numbering 251 officer pilots, and organized to fly as a unit for some 45 hours a year in the fulfillment of a syllabus of military exercises drawn up by the Navy Department, and to put in a substantial amount of additional practice under the direction of the unit commander. These organizations seem to be close to the ideal of military readiness, as do the nine squadrons of the Marine Reserve which are similarly organized, but their numbers are far inferior to any possible war-time need for immediate service. The specific need here seems to be for additional funds for Reserve purposes.

In the Air Corps, as previously indicated, the problem is not so much with increase of numbers as with improving the quality of the training given to a selected group. Every effort ought then to be made to assemble a group of chosen personnel into tactical units and to give them at least 60 to 100 hours of flying per year on military airplanes and doing military exercises. Such units, the cream of the present Group I, should have full priority of claim on any aviation Reserve appropriations. In this connection, though appreciating the distinction that exists between National Guard and Organized Reserve in the general national defense plan, it would seem advantageous to make a larger use of National Guard air units and so to decentralize the Air Corps Reserve to a greater degree than at present.

At present there are 19 National Guard squadrons in as many different states. They have a splendid record of efficiency, but they are limited by War Department decision to the single function of observation. The Commission accordingly suggests that further study be given to the classification of squadrons and to the possible desirability of assigning additional squadrons with more varied functions to such states as care to provide adequate buildings and sites for them, with subsequent transfer of personnel from the present Organized Reserve to the squadrons so created.

Whatever the precise machinery of organization that may be chosen and without attempting to usurp the function of

the War and Navy Departments by specifying exact numbers, it seems conservative to say that the aggregate of effective air force Reserves should be at least double what it is now. The training, at least for the Army, should be far more extensive and continuous than it has been at any time in the last ten years. A considerable part of the practice flying time might be taken, at least by the second-line Reserve, in light civil aircraft rented from commercial operators, the Service authorizing the payment of a fixed sum per hour for their use.

Flying under those conditions ought to cost less than one-third as much per hour as was told it now costs to operate Army aircraft for the Reserve. The Baker Board recommended "the purchase of small, inexpensive airplanes of good performance adequate for training pilots in cross country and night flying" for the Regular Army. The use of such economical equipment, preferably by rental rather than by purchase, for the Reserve seems even more desirable.

It is realized that this is a matter of finding funds with which to work, but the issue seems so important, and the need for well-trained Reserves in the event of war so great, and the dependence of the regular Services upon them so immediate, that the recommendation is made that the Reserves be given a distinctly higher priority than they now enjoy. At the same time the possible usefulness of special Assistant Secretaryships for Reserve in both Service departments is suggested, in order that the needs of the Reserve's development may be under constant sponsorship by an official of high rank who may always be heard in the Secretary's councils.

To be continued.

---oOo---

FLYING BY ARKANSAS NATIONAL GUARD

"We were impressed some weeks ago," writes the News Letter Correspondent of the 154th Observation Squadron, Arkansas National Guard, "by a report of the National Guard Bureau which aggregated and classified the total time flown by the various National Guard Squadrons. What interested us most was the relatively large proportion of the time of a number of squadrons that was put in performing tactical missions of one kind or another. We are very much interested in getting any and all information we can from these squadrons as to the type of flying done, the manner in which the missions are executed, whether any particular type of mission is favored and, if so, what stimulates the favoritism. As for our own squadron, being located on a Department of Commerce Airway, we have the use and benefit of the Airway's radio beam and V-6732, A.C.

considerable time has been spent in blind beam flying. We have a front gun target set up on our airport which we use to practice simulated front gunnery. We do some mapping and photography.

If any of the squadrons have any new

ideas or innovations for diverting a large proportion of the flying time toward tactical missions, we would like to know about them, using the Air Corps News Letter as a medium.

---oOo---

---oOo---

HENSLEY FIELD TAKES ISSUE WITH MAXWELL FIELD

The News Letter Correspondent from Hensley Field, Dallas, Texas, invites attention to the item "Heavy Air Traffic at Maxwell Field," which appeared in the News Letter of Feb. 1st, wherein the Operations Dispatcher reported that a total of 119 airplanes arrived at and departed from Maxwell Field between January 1st and 15th.

"It is believed that Maxwell Field will have to take a back seat when comparing heavy airplane traffic with Hensley Field," asserts the Correspondent from the latter station, and he then goes on to say:

"Records of this station show that a total of 105 visiting airplanes arrived at and departed from Hensley Field between February 1st and 5th, 1935; that a total of 434 visiting airplanes arrived at and departed from this station during the period from January 1st to February 5th, 1935; that during the calendar year 1934 a total of 2,758 visiting airplanes arrived at and de-

parted from this station, with only 16 days during the entire calendar year in which no visiting aircraft arrived at or departed from this station, and with a maximum of 153 visiting airplanes in one day; that during the calendar year 1933, a total of 2,585 visiting airplanes arrived at and departed from this station, with only 15 days during the entire calendar year in which no visiting aircraft arrived at or departed from this station, and with a maximum of 113 visiting airplanes in one day."

Not content with letting the matter rest then and there, the Hensley Field Correspondent goes on further to say:

"It is believed that over a period of any one year the number of aircraft (Army, Navy and Marine Corps only) visiting Hensley Field is greater than that at any other Air Corps station. In any event, a comparison of records in this respect with any other station claiming heavy air traffic in visiting aircraft, would be interesting."

---oOo---

WASHINGTON NATIONAL GUARD AIRMEN EXHIBIT KEEN INTEREST IN AIR FRONTIER DEFENSE

According to the News Letter Correspondent of the 41st Division Aviation, Washington National Guard, Felts Field, Spokane, Wash., intense interest in the National Air Frontier Defense program as first proposed by Representative Wilcox, of Florida, and amended recently by the War Department's legislative proposal, is being exhibited by the officers of this organization.

For the purpose of keeping themselves fully advised with all proposals to strengthen the nation's air defense, and particularly in the Northwest, the officers are meeting at regular weekly luncheons to discuss and consider all Air Corps proposals before Congress.

Interest in these matters has been materially stimulated locally by the present membership on the Senate Military Affairs Committee of Washington's junior Senator, Mr. Lewis Schwallenbach, Past State Commander of the American Legion. Senator Schwallenbach is known to favor a strong military policy, and has communicated with local National Guard Air Corps officers since entering Congress.

As between the Wilcox and War Department proposals, the local Air Corps officers favor the War Department plan, "because it provided for a GHQ Air

Force," which they regard as the first real move toward proper recognition of the Air Corps. However, full credit is given Representative Wilcox for bringing out the first real air defense program that has ever attracted national attention and support.

In all of their considerations, the local Air Corps Guardsmen are taking a firm position that the building of an air defense should be left entirely to the Office of the Chief of the Air Corps and the War Department. It is their contention that the project is far too important to the future of the Nation to be weakened by political pressure.

The News Letter Correspondent adds that at this time the Pacific Northwest is without practically any air defense, there being about 12 Army airplanes in this vicinity. It is pointed out that air defense in the Northwest is needed as a means of assisting in the protection of Alaska; that the Boeing Aircraft factory in Seattle, and the Navy Yards at Bremerton are without protection, to say nothing of the Puget Sound region in general.

It is because of these important situations that the policy of a properly developed air defense has been adopted at the luncheon meetings.

19TH COMPOSITE GROUP MAKES ITS BOW By the Albrook Field Correspondent

The 19th Composite Wing, which will celebrate its first birthday on March 17th, makes its initial bow to the readers of the News Letter. This Wing constitutes the Army Air Corps contribution to the defense of the Panama Canal Zone, and is commanded by Lieut.-Col. William C. McChord. The Wing headquarters is at Albrook Field, which is also the station of the 16th Pursuit Group, commanded by Major Robert L. Walsh. The other major unit of the Wing is the 6th Composite Group, commanded by Major Louis H. Brereton and stationed at France Field.

The first of January this year marked the beginning of a period of intense activity for the newly organized Wing. These intensive operations, however, were not caused by an unexpected order or condition but resulted from the careful planning by the Wing Commander and staff to take full advantage of the brief dry season. This season lasts approximately from the 1st of January to the 31st of March, and only one of the three months - January - is fully available to the Wing for its training. February is devoted to sector maneuvers in which the 19th Composite Wing or its elements are required to participate, while the third dry month - March - is reserved by the Department Commander for his maneuvers. Training exercises scheduled for the remaining months of the year are subject to frequent weather interruptions. When units of the Wing move a short distance from their home airdromes during the wet season they are likely not to return for many days. The Wing training program, therefore, called for combined operations for practically every week day of the month of January.

An interesting feature of the program was a four-day operation, during which the Bombardment and Observation units, commanded by Major Brereton, occupied an airdrome at the new gunnery range at Rio Hato, with a free hand to simulate bombing raids against vital points in the Canal Zone. This gave the 16th Pursuit Group an opportunity to try out many and varied forms of defense, one of which it would be necessary to adopt if called upon to defend a line approximately 45 miles long with approximately 33 Pursuit airplanes.

These maneuvers afforded valuable experience and gave the participating units an opportunity to improve communications and the technique of their particular branch of aviation. In the critique which followed the exercises, the Wing Commander expressed himself as being highly pleased with the progress made by the two groups and commended not only the flying but also the maintenance personnel.

Aerial reviews had a part in the combined training program for the Wing. One inspection and review was held at Albrook Field for Major General Harold B. Fiske, the Department Commander. Gen. Fisk was accompanied on the inspection and in the reviewing stand by Brigadier General John W. Gulick, the Pacific Sector Commander, and by distinguished officials of the Zone Civil Government and several foreign diplomats.

At the conclusion of the inspection and review, General Fiske expressed himself as highly pleased with the appearance of the aircraft on the ground and also with the ability of the Wing to pass the reviewing stand in a precise and orderly manner, despite the fact that the airplanes participating had such a wide variety of speeds and flying characteristics.

Another inspection and review of the entire Wing was held at France Field for Major General Lytle Brown, Commander of the Atlantic Sector. At the conclusion of the review, General Brown highly complimented Colonel McChord on the Wing's appearance and performance.

---oOo---

MAXWELL FIELD ENTERTAINS CHINESE AVIATION MISSION

Folding his arms and smiling engagingly, Colonel P.T. Mow, wiry young Chinese Air Corps Attache of the Nanking Government, stated that of all the U.S. Army Aviation posts he and his party visited within the last two weeks, Maxwell Field and the Tactical School offered greater opportunities for studying modern American methods of air defense. In fact, Colonel Mow was so interested in his inspection of the post recently and so anxious to prolong it that he declined to set a date for the party's departure from Montgomery, saying that he would leave when he had seen enough of Maxwell Field.

Colonel Mow is head of an official party from China on a tour of leading aviation activities throughout the United States and Europe. Other members of the Mission are Lieut.-Col. F.S. Liu, Major Y.T. Yeng, Messrs. C.F. Wang and E.S.K. Yen. The officers are all connected with the Chinese Army Air Corps, while Mr. Wang is an engineer and Mr. Yen is Secretary, both in the government service. The party has been in America, or "The States," as Colonel Mow said, about five weeks, coming here from Europe.

The Chinese officials arrived in Montgomery from Langley Field, Va., and their survey included Wright, Selfridge and Mitchel Fields. Barksdale and Randolph Fields are next on their visiting list.

AIR CORPS INSTRUMENT LANDING SYSTEM

By Marguerits Jacobs Heron

The year 1934 proved to be one of progress and activity for those interested in what is undoubtedly one of the Air Corps' outstanding developments - the Air Corps Instrument Landing System.

During this year its application to airplanes other than basic training types was proved practical, and thousands of successful landings were made with high speed, multi-motor Bombardment and Transport types with the sole aid of the system's installations.

Classes of Army pilots continued to be qualified in its use at Wright Field, the pilots finding it as simple in operation with faster landing speeds and larger airplanes and as uncomplicated as with training types. Installations were made at Langley Field and at the Newark Airport during the Army Air Mail activities, and plans for installation at other Air Corps fields were completed.

Later, the engineers installed equipment in a Bureau of Air Commerce airplane and placed at their disposal every means of making a thorough investigation of the system, as well as all the tests they desired. In October, 1934, the final decision of the Bureau of Air Commerce was made for the adoption of the Air Corps system as standard for commercial operation. The following is quoted from a letter from Mr. Eugene L. Vidal, Director of Air Commerce:

"Allow me again to express my appreciation for the splendid cooperation of the Army Air Corps and my sincere admiration of the engineering organization and technical skill which produced this wonderful development."

Since this time, five of the major airlines have sent pilots to Wright Field for instruction in the Air Corps system, and these men will in turn act as instructors to other pilots of their companies. Personnel of the Department of Commerce who will take charge of installations at commercial airdromes, inspection, and training of pilots have likewise been at Wright Field for instruction.

As noted in a previous issue of the News Letter, Captain Albert F. Hegenberger was awarded the Distinguished Flying Cross Oak Leaf Cluster in May, 1934, for his very valuable contribution to aviation in this development. It was an honor that likewise brought pleasure and reward to his associates in the development of the project. For it is a loyal and fearless group of officers and civilian engineers who have aided Captain Hegenberger in this signal success.

It is an interesting fact to note

that in the thousands of test landings made under the hood in the testing and developing of instrument landing equipment not a single fatality has occurred or even an accident of any moment to personnel or equipment. This in itself, we believe, is high tribute - but we touch wood, as one always should amid the uncertainties of living - as we say it.

Ed. Note: It may be of interest in connection with the above article, written by the Materiel Division Correspondent, who was a constant contributor to the News Letter in bygone days, and to whom we are glad to extend a hearty welcome, to quote from an article on the Army Air Corps Radio Blind Landing System, which appeared in a recent issue of the Air Commerce Bulletin, issued by the Bureau of Air Commerce, Department of Commerce.

It is stated in this article that, following a conclusive demonstration of the Army Air Corps blind-landing system at Langley Field, Va., participated in by Eugene L. Vidal and other Air Commerce officials, this system was adopted as standard by the Bureau of Air Commerce.

This demonstration "marked the conclusion of 11 months' work by the Bureau of Air Commerce in which various systems and modifications for blind landing were investigated and tested as applied to a Ford tri-motor transport type airplane, under the direction of Chester A. Snow, Jr. Tentative plans were immediately made for the establishment of this facility along a transcontinental air route together with its installation at one or more central points where commercial air line pilots may become familiar with its use. Invitations have been issued to several representative air lines to send selected groups, including operations and technical personnel and expert instrument pilots, to Patterson Field at Dayton, Ohio, to participate in individual demonstrations of the system.

A brief description of the demonstration on September 13 will help to explain the operation of the system in blind landing as well as the most valuable additional function served by its main element, the Kreusi loop radio compass as a navigational aid.

The party took off in the Department Ford from the Washington Airport, and a few minutes later tuned the radio compass receiver on the Richmond, Va., radio range station which is normally used for beam and weather broadcast. As the plane was swung into a heading directly toward the Richmond station, the needle of a small, round dial instrument in the pilot's cockpit assumed a vertical or zero center position. Subsequent devia-

V-6732, A.C.

tions of heading were immediately indicated to right or left, as the case might be, by corresponding deflections of the needle. By merely steering the airplane so as to keep this needle in its center position, test pilot E. A. Cutrell flew at all times with the certainty of an exact heading toward the Richmond range antenna. While on this flight use was made of the radio range transmitting station. The operation of the loop compass must in no way be confused with the normal use of the range beam. The radio compass is a homing device. It will operate on any type of transmitter or commercial broadcasting station within its frequency and power range. It makes no use of fixed radio beams, but continually indicates heading rather than position with reference to a fixed predetermined path and indicates with equal certainty from all points toward the transmitting station on which it is tuned. In short, the radio loop compass tells the pilot directly not where he is but where he wants to go.

About 10 minutes after take off from Richmond, the radio compass was tuned on one of the special landing transmitters at Langley Field. This transmitter is merely a low power broadcasting station equipped with a gas engine driven generator for power supply and a collapsible mast antenna. The whole outfit is compactly mounted in a small automobile truck of the light delivery type. Guided by radio loop compass tuned on this mobile transmitting station, the Ford airplane was brought directly over a predetermined point some 1,200 feet from the edge of Langley Field in position for an into-the-wind landing.

In all six hooded instrument landings were made, the party of observers being divided into two groups which by flying separately enabled each to witness the operation of the system both from the air and from the ground.

The party was most fortunate in being joined for the demonstration by Captain Albert Hegenberger, Air Corps, who flew in from Wright Field, Dayton. Captain Hegenberger, working under a special directive of the Secretary of War and acting in the capacity of project engineer with a small staff of civilian scientists, actually developed the system at Wright Field about 2 years ago. He personally acted as test pilot during the development's experimental stage, climaxing his work with a short solo flight completely hooded from start to finish, performed on the spur of the moment without special preparation of any kind. * * *

In the Army Air Corps blind landing system use is made of two small automobile truck transmitting stations of

the type above described. In addition, each truck is equipped with a small secondary transmitter which, operating in conjunction with a second instrument located near the radio compass indicator on the airplane instrument board, causes a light to flash as the airplane passes over each ground station. Thus the pilot having arrived at a predetermined point by means of the radio loop compass, is informed of his arrival by the visual marker's light flash just described.

In actual operation the two trucks are driven to selected points on the road network surrounding the landing area, and assume positions along a line projected across the field in an into-the-wind direction. Whereas the relative distances of these positions from the field border may be varied to suit conditions of terrain, wind, etc., a convenient combination for most conditions with the Ford trimotor is 1,500 feet and 2 miles from the field border for the inner and outer stations, respectively. The pilot flying in by instrument from some distant point may, when within 30 or 40 miles, tune in on the inner station and fly directly to it by means of his radio loop compass.

His momentary arrival over the inner station is indicated by the light flash of the visual marker instrument. He immediately tunes on the different frequency of the outer station and flies to it by the same means. One or more interstation trips serve to accurately establish the desired into-the-wind course, which is then clocked on the directional gyro. In preparation for the final approach, the pilot lets down to approximately 800 feet as indicated by his sensitive altimeter, and heads toward the field, passing over the outer station at this altitude. Immediately on passing this station, the engines are throttled and the airplane by instrument is held in a power glide of such angle as to enable it to pass over the inner station at an indicated altitude of about 150 feet. Once the final marker light flash has been received, the pilot is through with radio loop compass and marker, and through with altimeter. Reverting to his directional gyro for course, he relies on his flight instruments to maintain the glide angle before mentioned.

In the Ford trimotor we have found engine speed of 1,150 revolutions per minute and air speed of 75 miles per hour producing a rate of descent of 400 feet per minute to be about the optimum desideratum. These figures, however, are by no means critical and may be varied within limits with almost equally good results. Contact is made usually lightly in a "wheel type" landing with tail slightly below line of flight position. The pilot, on feeling the contact, closes the throttles and as the tail drops of its own accord, is able to apply brakes

by reference to the directional gyro or to shorten the landing run.

It will be noted from the foregoing description that application of the system depends merely on the routine succession of logical steps which become progressively simpler in requisite technique as the more critical point of actual contact with the ground is approached.

Another noteworthy point in connection with the system is that the continual use of its main element, the radio loop compass, in routine navigation will automatically keep the pilot trained in large measure for actual instrument landings.

During the last 8 months in which the Bureau of Air Commerce has been investigating the applicability of the Army Air Corps system to commercial transport aviation, over 150 unassisted hooded landings have been made with the Ford trimotor at 5 different fields and in wind conditions ranging from calm to 12 miles per hour tail wind as well as in varying degrees of cross wind. It is believed that improvements on more modern airplanes, such as flaps, long-travel shock-absorbing units, pedal brakes and low speed controllability inherent in modern design, will materially simplify the blind landing operation.

As to ease and speed of pilot instruction in the Air Corps system, which also may provide a rough index of the periodic practice requisite to thereafter keep the pilot in training, the following is interesting: E.A. Cutrell, highly trained and expert instrument test pilot of the Bureau of Air Com-

merce, accomplished his first unassisted hooded landing after 1 hour and 15 minutes of flight training on an Army-type airplane relatively unfamiliar to him. Another pilot, not an expert in instrument flying and not in training, required just double this time. The Air Corps last winter operated a school in blind landing for their officers, in which graduation requirements were five unassisted completed consecutive blind flights. Flying time for completion of this course averaged about 10 hours, and at the time most of these students had received little if any instrument flying instruction.

The advantages of the standardization of a system usable alike by commercial and military aviation are too numerous and obvious to mention. Suffice it to say that both commercial air transport and Army Air Corps will be rendered tremendously more effective by this step.

It would be improper to conclude without detailing to some extent the wholehearted, public-spirited, and unselfish cooperation given to Air Commerce by the Army Air Corps in carrying out of this project. On two occasions in particular, first during the air mail emergency and secondly during their preparation for the Alaska flight, the Air Corps was called upon for equipment and the time of trained technical personnel which it could ill afford to spare. Even when most hard pressed, no job was considered too great, no request was refused. The splendid type of interdepartmental cooperation thus initiated augurs well for future air accomplishment."

---oOo---

NEW WIND INDICATOR DESIGNED AT MATERIEL DIVISION

A new wind direction indicator which permits easier interpretation from low altitudes and from the ground than any type heretofore in use has been designed at the Materiel Division, Wright Field, Dayton, Ohio, and placed in service test at Randolph Field, Texas.

This indicator consists of a tetrahedron (four-sided figure), each side triangular in shape, which measures 36 feet from apex to stern, and 15 feet across the base of each side triangle. The unit is installed on a concrete base on the field and is so balanced and pivoted that the apex heads into the wind. A horizontal mast extending out from the apex increases the length and gives clearer definition, especially for night indication, since both the mast and the tetrahedron are outlined by means of 10-watt lights having special green hoods. For daylight visibility the left side is painted in international orange with black blocks at the edges and the right side is white

with black blocks.

The structure is of steel, covered with fabric. It is mounted on a concrete base and weighs, complete, 2100 pounds. The base is equipped with accessories for giving remote wind indication, especially useful in an operations office, for locking the indicator in any desired position, and for rotating indicator to desired position previous to locking. The last two features are used primarily for training purposes or for narrow fields where it is feasible to control directional landing.

This type indicator replaces the B-4A type and is practically ready for standardization.

---oOo---

At Hamilton Field experiments are being conducted in the evenings now to test the new floodlights just installed on the ends of the flying field. In addition to the floodlights, Hamilton Field has a 100,000 candle power beacon light on its water tank.

COLD TEMPERATURE STARTING OF AIR CORPS ENGINES

By H. L. Carpenter

Considerable trouble has been experienced in starting airplane engines of 500 h.p. and over at sub-zero temperatures. Various methods can be employed, such as warming the oil by application of heat from without the engine, draining the tank at time of shut-off and refilling with hot oil at time of starting, or using a separate oil tank filled with very light oil and circulating this oil through the engine before shut-off. The first two methods, however, require special equipment and personnel which would amount to approximately 2500 pounds for a flight of 18 airplanes.

Since no data regarding the torque required, number of turns necessary, or rate at which the engine should be turned were available for a suitable heavy duty starter, an investigation was made at Wright Field, using a cold chamber and an Air Corps type GIV-1570-F engine. Tests extended through temperatures ranging from +150 F. to -20° F., and resulted in the following determinations:

a. Engine can be started on first revolution when cranked at a minimum speed of 70 r.p.m. down to +50° F. at lower temperatures, one to five revolutions at the same average rate are necessary.

b. Engine oil of sufficiently low viscosity only permits this accomplishment. Oil coolers should be used if necessary to prevent oil from overheating after engine has been started.

c. Engine must be primed at engine intake manifold directly over intake valves, the priming fluid being broken up by priming jets into as fine a spray as possible.

d. Carburetor must be designed to permit volume of fuel entering engine to be adjusted to full rich for starting, and "leaned" down to prevent "overloading" as engine warms up.

e. Ignition must be so installed to permit retarding, preventing back-firing, at low cranking speeds and must give positive spark at proper time. Battery ignition found preferable to magneto ignition for starting.

f. In order to maintain sufficient reserve energy in starter to turn engine one or more revolutions, the engine torque must be approximately 300 ft. pounds lower than that of starter clutch setting. To prevent failure of engine and starter parts, starter clutch shall never be set over a maximum of 900 ft. pounds breakaway torque.

In order to hold the torque required for engine turnover at a low value for low temperature starting, it was found

necessary to replace heavy oils with those of lighter S.A.E. ratings. Otherwise the torque increased at temperatures below +150° F. to such an extent that practically all energy in the starter was lost in the starter clutch. With the equipment used, it was not possible to measure the torque while engine was being brought up to speed, but this is being changed so that on future tests torque measurements will be taken by recording instruments on the dynamometer.

Present engines will fire while being turned over with present starters, but explosions are so weak that the engine cannot be kept running. This project is one which, since engines of larger horsepower are being developed, demands continued concentration on the part of the Materiel Division and cooperating manufacturers.

---oOo---

HIGH GUNNERY SCORES FOR 15TH OBS. SQDN.

The pilots of the 15th Observation Squadron took the lead on the Airship Group pilots in average flying time, due to their participation in the gunnery practice at Chapman Field, Miami, Fla., where weather is "comme ca." In approximately five weeks all of the officers and combat crews of the squadron completed their firing, this period including the time required to transport personnel and equipment from and to Scott Field, Ill. Organization and station activities at its home field were maintained at the same time.

The Squadron is justly proud of its performance on the gunnery range. The scores turned in showed that of the pilots, 92.3% were experts; observers, 100% experts, and the 16 enlisted men selected for combat crews, 100% experts.

Of the 13 pilots firing the Fixed Gun course, 1st Lieut. R.O. Brownfield was high scorer with 873, followed by 1st Lieut. W.L. Ritchie with 853. High scorers among the 13 Observers firing the Flexible Gun Course were 1st Lieut. R.O. Brownfield with 1187 and 2nd Lieut. Gitzinger, Air Reserve, with 994. Private, 1st Class, S.L. Gross and Staff Sgt. M.G. Hall were high guns among the enlisted men firing the Flexible Gun course, the former's score being 996 and the latter's, 962.

The 15th Observation Squadron returned to Scott Field on February 17th, wearing broad grins, exhibiting much sun tan and being thoroughly satisfied with Chapman Field as a Gunnery Base. The proximity of Miami and Miami Beach was largely responsible for the satisfied

V-6732, A.C.

smirks is the biased opinion of the News Letter Correspondent from Scott Field.

HAMILTON FIELD AIRMEN TAKE OFF FOR PANAMA

By the News Letter Correspondent

Fifteen pilots and 14 enlisted men took off from Hamilton Field, San Rafael, Calif., on the first leg of their training flight to Panama on Feb. 15th in four air transports. They flew to Rockwell Field to learn in ten days the new equipment, which includes controllable pitch propellers and the latest of radio sets. The flight will then proceed to Washington, D.C., via San Antonio, Texas, where one plane will remain as a replacement, under 2nd Lieut. Roy H. Lynn. Two Staff Sergeants to service this plane will also remain as replacements until the Panama Flight has been cleared at Miami, Fla.

Upon leaving San Antonio, the 10 Martin Bombers will be flown to the Nation's Capital to await orders for the official start of the main flight to the Canal Zone, involving a distance of over 2,100 miles.

Under the command of Captain Harold D. Smith, 31st Bombardment Squadron Commander, this routine training flight will give the personnel experience in long distance flying and navigation. It will also test speed, range, fuel and oil consumption of the B-12A Martin Bombers. With wide open throttles, these ten fast new Bombers will roar toward the equator at a cruising speed of approximately 200 miles per hour. One stop will be made at Miami, Fla., for the purpose of refueling, and then will follow a 1,100-mile flight over water to the Panama Canal.

A non-stop flight with Washington as the goal on the return will be the supreme achievement, should 817 gallons of gas suffice for the 2,150 miles. After reaching Washington, the flight will return to Hamilton Field, from which the personnel and airplanes had come. All of the participating personnel are from Hamilton Field with the exception of two Crissy Field officers, Lieuts. Richard C. Lindsay and William Ball, who are graduate navigators and will guide the airplanes over the 1100 miles of the Gulf of Mexico.

A list of the personnel participating in this flight was published in the previous issue of the News Letter.

The contrast flight to the one to Panama is the Cold Weather Test Expedition, in which the airmen, garbed like Eskimos, fight the rigors of snow and ice in temperatures that freeze the skis of their planes in a few minutes. King Winter has mantled the terrain with 42 inches of snow and has frozen the ice to 18 inches at Duluth, where 17 planes of every type that the American Army possesses, rest on the bay ice with skis

frozen to the ground. To release the plane, two men dig a trench from the middle of the ski back to the wheel. Then they saw the ski loose from the compact snow with a rope.

Such are the daily struggles which confront Capt. Arthur H. Hamilton, 1st Lt. Paul Kemmer and 2nd Lt. Birrell Walsh, as they combat the Klondike weather of the Northwest in their flight toward Great Falls, Montana. Six enlisted men who share the work and hardships of this expedition are Staff Sergeant Thomas B. Vinson, Sergeants Roy H. Coulter, George W. Hollowell, Ludwig Kurrley, Corporal Harvid Saeger and Private Jack Mathews.

---oOo---

F L Y I N G B L I N D

By Albert D. Cannon

Crouched low in the cockpit of the little single-seater sat Cadet Josephus Jones. Beads of clammy perspiration hung heavily upon his youthful face. Into his eyes had come a light that seemed to cry out that the lad's mental state bordered upon desperation. The world beyond the confines of his cockpit was totally obscured; not even the glimpse of a single friendly star whereby he might get his bearings. His first real need for proper interpretation of his "Blind Flying Instruments;" he had been so overwhelmingly confident of his mastery of them. Yet here he was, completely lost. Hours it seemed had passed since he had lost the "beam," and trying frantically to recall the exact wording of his text books. He was swinging in wide arcs attempting to again pick it up and to find his course. More than a reasonable amount of time for him to have reached his objective had elapsed, yet he was still flying on, God only knew where.

Suddenly the ship slid off on its right wing and settled into a tight spin. To the novice at the controls it seemed as if the whole world had settled right in the pit of his stomach. He could stand it no longer, so over the side he went.

Pushing back the cockpit cover, he stepped down to the hangar floor. Timidly he approached the instructor, saying: "Please, Lieutenant, couldn't we start this problem over again; I've never been in a Link Trainer before."

---oOo---

Second Lieuts. Louis H. Gitzinger, Donald E. Philip and John W. Christner, Air Reserve, recently reported at Scott Field, Ill., for six months' active duty.

V-6732, A.C.

KELLY FIELD GRADUATES ANOTHER CLASS OF AVIATORS

February 20th was Graduation Day at the Advanced Flying School, Kelly Field, San Antonio, Texas, when 62 students who successfully completed the one-year flying course at the Air Corps Training Center, received their "Wings" and the rating of "Airplane Pilot." Among these students are six officers of the Regular Army, who were detailed to the Air Corps for flying instruction; two officers of South American countries, and 54 Flying Cadets. Specializing in the various branches of combat aviation were 22 students in Bombardment, 14 in Pursuit, 15 in Observation and 9 in Attack.

The six student officers were assigned by War Department Orders, just issued, as follows:

Second Lieuts. Harry S. Bishop, Coast Artillery (B); David N. Crickette, Field Artillery (B) and John M. Price, Infantry (A) to the Hawaiian Department.

Second Lieuts. Robert D. Landry, Infantry (P) and Samuel A. Mundell, Infantry (O) to the Panama Canal Zone.

Second Lieut. Charles A. Clark, Jr., Field Artillery (B) to the Philippines.

The 54 Flying Cadets are being assigned to various Air Corps tactical units for active duty under their Cadet status for the period of one year.

The two foreign officers who graduated, Captain Nelson L. Wanderley, Brazilian Army, and 2nd Lieut. Nicholas S. Davila, Colombian Army, will return to their native countries.

Flying Cadets who graduated as Attack Pilots are enumerated below, as follows:

James C. McGehee	Birmingham, Ala.
John F. Guilmartin	Midway, Ala.
David B. Kuhn	Texarkana, Ark.
Loris W. Moonaw	Santa Ana, Calif.
Boyd Hubbard, Jr.	Adair, Iowa
Arthur Y. Snell	Brockton, Mass.
Tom Bolton	Dallas, Texas
Podge M. Reed	Moody, Texas

Bombardment Pilots

Raymond V. Schwanbeck	Ash Ford, Arizona
Frank B. Scott	Little Rock, Ark.
Gerald L. Cherymisin	Alta Loma, Calif.
Joseph A. Thomas	Hollywood, Calif.
George F. Breck, Jr.	Los Angeles, Calif.
Lee B. Coats	Los Angeles, Calif.
Willis S. Marvin	Riverside, Calif.
Lawrence W. Greenbank	Washington, D.C.
David C. Barrow, Jr.	De Soto City, Fla.
Carlos J. Cochran	Topeka, Kansas
Clarence T. Edwinson	Topeka, Kansas
John B. Montgomery	Charlotte, N.C.
Arthur H. Rogers	Raleigh, N.C.
Anthony G. Eubanks	Corpus Christi, Texas
John H. Jeffus	Plainview, Texas
Marshall A. Elkins	Waco, Texas
Joseph H. Wilson	Payson, Utah
Stetson M. Brown	St. Johnsbury, Vt.
Walter J. Harrison, Jr.	Crozet, Virginia

Observation Pilots

Arthur V. Jones, Jr.	Los Angeles, Calif.
Lloyd A. Walker, Jr.	Los Angeles, Calif.
John L. Dufrane	Oakland, Calif.

Jesse A. Smith	Woodrow, Colo.
Tracy R. Walsh	Fensecola, Fla.
William L. Fernald	Tarpon Springs, Fla.
George S. Brewer	Arcadia, Ia.
Robert B. McClellan	Baton Rouge, La.
Francis H. MacDuff	Brockton, Mass.
William Q. Rankin	Gulfport, Miss.
Frank V. Haynes	Clyde, N.C.
Norman L. Peterson	San Antonio, Texas
Thomas M. Bartley, Jr.	Waco, Texas
John B. Cornett	Waco, Texas

Pursuit Pilots

Lucian N. Powell	Carbon Hill
John S. Chennault	Montgomery, Ala.
Willis M. Darnell	Little Rock, Ark.
George S. Buchanan	Falo Alto, Calif.
Ansell S. Williams, Jr.	Falo Alto, Calif.
Frederick W. West, Jr.	San Francisco, Calif.
William W. Jarrell, Jr.	Thomasville, Ga.
Frank E. Rouse	Boston, Mass.
Thomas E. Moore	Collettsville, N.C.
Frank L. Higgs	Columbus, Ohio
Baskin R. Lawrence, Jr.	Seneca, S.C.
Lawrence R. Olmstead, Jr.	Brownsville, Texas
Frank J. Bennett	Gretna, Va.

Note: Specialist Pilot Ratings of officer graduates - (A) Attack; (B) Bombardment; (O) Observation; (P) Pursuit.

Among the "Pursuiters" of the Flying Cadet graduates the name of John S. Chennault is noted. Here is a case of an Air Corps Pilot providing a new pilot for his branch of the service, for the father of this young man is none other than Captain Claire L. Chennault, of Maxwell Field, Alabama, leader of the well known Air Corps acrobatic trio who have amazed spectators at Air Races with their perfectly timed air maneuvers and whom the newspapers have termed "The Men on the Flying Trapeze."

It seems that, since young Chennault graduated as a "Pursuit" pilot, he is no mean hand at acrobatic flying and perhaps some day he may even surpass the startling aerial performances of his dad.

---oOo---

OFFICIAL DEDICATION OF HAMILTON FIELD

The official dedication of Hamilton Field, San Rafael, Calif., has been set for May 5, 1935, when it is expected - so says the News Letter Correspondent - that 20,000 people will gather at the air base to see the massed flight of planes and to hear the dedication exercises. All the civic organizations in the Redwood Empire have announced their intention to make this social function the greatest that the Bay districts have witnessed.

The American Legion is also expected to contribute its share toward making this event a grand success.

---oOo---

Word was received at Maxwell Field that Lt.-Col. H.H. Arnold, C.O., of March Field, with 40 P-26's. piloted by 25 officers and 15 cadets, would pay a call before the end of Feb. Maxwell Field plans to entertain the visitors in true southern style.

CHANGES IN COMPOSITION OF MARCH CLASS AT RANDOLPH FIELD, TEXAS

The issue of the News Letter of February 1st gave the names of Flying Cadet appointees selected by the Chief of the Air Corps to comprise the class to begin flying training at the Air Corps Primary Flying School at Randolph Field, Texas, on March 1, 1935.

Since this list was published, the composition of this new class has undergone many changes, for various reasons. There has always existed a long waiting list of young men eager to take advantage of the flying training afforded at the Air Corps Training Center.

The selection of applicants for Flying Cadet appointment is governed by a policy which gives preference -

a. To graduates of the U.S. Military and Naval Academies failing to receive commissions due to lack of vacancies;

b and c, respectively, to enlisted men of the Air Corps and of other branches of the Regular Army who, at the time of appointment, have served at least 11 months;

d. To officers and enlisted men of National Guard Air Corps units;

e and f, respectively, to college graduates of Air Corps ROTC units and of ROTC units of other branches of the service;

g. To graduates of recognized colleges and universities;

h. To officers and enlisted men of the National Guard with at least 11 months' service;

i. To students in Air Corps ROTC units who have completed their Junior year;

j. To Reserve officers and members of the Enlisted Reserve Corps with at least 11 months' service.

k. To students in good standing of recognized universities who have completed their sophomore year.

l. To others.

In selecting the students for the March 1st Class at Randolph Field, it was possible for the first time in quite a number of years to include those applicants coming under the category of "k" as listed above. Some of the applicants who were offered a Flying Cadet appointment were eliminated when they failed to pass the physical examination. Others who had been on the waiting list for quite some time declined appointment for the reason that they had secured desirable employment in the meantime. A number of applicants had entered the holy state of matrimony, and the regulations say that "Candidates for appointment as Flying Cadets must be unmarried male citizens of the United States," so this provision of the regulations automatically eliminated them.

In this particular connection an incident was injected into the proceedings which some may consider amusing and others, tragic. The editor was told in good faith that one of the candidates who had joined the ranks of the Benedicts offered to divorce his better half in order to secure the appointment he had been so eagerly waiting for.

The names of the candidates added to the

March, 1935, Class, are listed below, as follows:

Thomas, Wm. McKinley	Rockville Center, L.I., N.Y.
Beaty, John C.	Azusa, Calif.
Beeman, Marshall E.	Los Angeles, Calif.
Brown, Nelson T.	Tulare, Calif.
Cobb, Marvin W.	Santa Barbara, Calif.
Ames, Kenneth G.	Bridgton, Maine
Armstrong, Robert D.	Cincinnati, Ohio
Avera, James K.	Austin, Texas
Ballou, George A.	Rowena, Ky.
Atkinson, Robert S.	Reno, Nevada
Boyd Clay Allen	Santa Fe, New Mexico
Boone, Dan E.	Oklmulgee, Oklahoma
Clutter, Bartley A.	What Cheer, Iowa
Clark, Murray F.	Clovis, New Mexico
Cautoros, Frank A.	Columbus, Ohio
Corrigan, Walter W.	The Dalles, Oregon
Davis, Francis Lyle	Grand Rapids, Mich.
Donicht, Harry Louis	Glencoe, Minnesota
Pale, Charles E.	Vancouver, Washington
Edgington, Leo F.	Salina, Kansas
Engene, Leonard	Bergen, North Dakota
Edwards, Albert E. Jr.	Deming, Washington
Finn, Ryder W. Fvt.	Hamilton Field, Calif.
Forrester, Bruce	Kansas City, Mo.
Gadton, Paul	Myra, Texas
Geisness, Robert A.	Port Angeles, Wash.
Gibson, Kenneth H. Fvt.	March Field, Calif.
Hardy, Claude	Emporia, Kansas
Heil, Boyce F.	San Antonio, Texas
Harris, Kenneth A.	Seattle, Wash.
Hamlin, Ancil	Whitely City, Ky.
Hogg, George Wm.	Fernald, Iowa
Johnson, Wm. F.	Fulton, South Dakota
Johnston, John M.	Kansas City, Mo.
Lessig, Cecil P.	Salina, Kansas
LaPierre, Bruce H.	Cincinnati, Ohio
Luetcke, Hilmer	San Antonio, Texas
Morris, Robert A.	Elkins, West Virginia
McKay, Leroy S.	El Reno, Okla
Patman, James H.	Hughes Spring, Texas
Scott, Robert P.	Long Island City, N.Y.
Sheffield, Wallace B.	San Antonio, Texas
Sailors, Robert E.	Champaign, Ill.
Sherman, Willard E.	Mt. Vernon, S.D.
Mathews, Marvin D.	Bay City, Mich.
Taylor, Philip L.	Williamstown, Mass.
Thompson, Zane, Jr.	Cambridge, Mass.
Wackwitz, Ernest F.	Rockville Center, L.I., N.Y.
Wade, David A.	Minden, Louisiana
Walker, David E.	Sacramento, Calif.

The following names of candidates were removed from the list of those making up the March, 1935, Class:

Adamson, George B.	Reno, Nevada
Ashworth, Walter V.	Hamilton, Mo.
Barton, Willie	Jefferson City, Mo.
Bates, Harvey C.	Marietta, S.C.
Blalock, Thomas L.	Jacksonville, Fla.
Brooks, Lawrence K.	Clayton, N.Y.
Brown, Marion Judd	Nevada, Texas
Browne, W. Robert	Dallas, Texas
Burns, Henry F.	Utopia, Texas
Burns, Virgil	Wakarusa, Indiana
Combs, Alton	Middletown, Ohio
Eads, Harold E.	Greeley, Colo.
Farmer, Bob L.	Plainview, Texas

Fisher, Walter S.	Beebe, Arkansas	Munford, R. Sims	Waynesboro, Penna.
Fortmann, Bernhard G.	Pearl River, N.Y.	Nail, Max	Memphis, Texas
Freeman, H. Hoyt	Hartford, Conn.	Norris, John I.	St. Joseph, Mo.
Freund, John L.	Washington, D.C.	Norton, Fred C.	McMinnville, Oregon
Friar, William F.	Florence, S.C.	Oldham, Jack Ray	Kansas City, Mo.
Harwood, Bruce L.	Claremont, Calif.	O'Reilly, Patrick C.	Eufaula, Okla.
Hatfield, Fred A.	Highland Park, Mich.	Parsley, Jarvis D.	London, Ky.
Hobbie, Richard M., Jr.	Montgomery, Ala.	Peelle, Elbert	Whittier, Calif.
Hulvey, Charles N., Jr.	University, Va.	Petersen, Francis M.	Ogden, Utah
Johnson, Robert E.	Omaha, Nebraska	Purdy, Edward E.	Meeteetse, Wyoming
Kamb, Roy A.	Mt. Vernon, Wash.	Shelton, Thomas J., Jr.	Plainview, Texas
Keene, Milton C.	Pinckneyville, Ill.	Silversmith, Nathan	Brooklyn, N.Y.
Kyle, Charles V.	Cedarville, Ohio	Sommers, Paul H.	Jefferson City, Mo.
Lange, Ronald W.	Duluth, Minn.	Spratt, Keith	Ames, Iowa
Lathrop, Alfred B.	Pasadena, Calif.	Stevenson, Marvin	Lisco, Nebraska
Lee, Burton Donald	Nixon, Texas	Stormont, James C.	Pittsburgh, Pa.
Mann, Robert Anderson	New Market, Ala.	Stuck, Sanford W.	Kansas City, Mo.
Koett, J. Williams	Pittsburgh, Pa.	Talkington, Perry C.	Crystal Springs, Miss.
Maddox, Clifford D.	San Diego, Calif.	Tomlinson, Joseph H.	El Paso, Texas
Martin, Francis J.	Ottumwa, Iowa	Trew, James L.	San Diego, Calif.
Martin, Richard F.	Multnomah, Oregon	Wallace, Dwane L.	Wichita, Kansas
McAllister, Remus G.	Glendale, Calif.	Wuerpel, Morris	Attleboro, Mass.
McCauley, George E.	Los Angeles, Calif.	Yaggy, Edward E.	Hutchinson, Kansas
McMillan, Edward B.	Bay City, Mich.		

---oOo---

UNITED STATES GOVERNMENT INSURANCE

The following information relating to Government Insurance has been furnished to the News Letter through the courtesy of the Veterans Administration, Washington, D.C., and is published as being of vital interest to Air Corps personnel:

"Officers and enlisted men now entering the active service under the War or Navy Department, or Coast Guard, are entitled to apply for insurance in multiples of \$500, not less than \$1000 or more than \$10,000, within 120 days from date of enlistment or entrance into the active service and before retirement, discharge or resignation.

There are seven different plans of insurance provided by the Government - Ordinary Life, 20 and 30 Payment Life, 20 and 30 Year Endowment, Endowment at age 62 and Five Year Level Premium Term Insurance. Government Insurance provides for the payment of benefits in the event of total permanent disability and death and the premium charged is the net rate according to the American Experience Table of Mortality with interest at three and one-half per centum per annum.

Total Disability Insurance, providing for the payment of benefits in the event the insured is totally disabled as the result of disease or injury for a period of four consecutive months or more, may be included with any of the plans of insurance provided, upon application, proof of good health satisfactory to the Administrator, and the payment of the necessary premium. This additional insurance may also be included in policies now in force, and is independent of any disability clauses contained in such policies.

Veterans of the World War who served in the Military and Naval Forces of the United States at any time from October 6, 1917, to July 2, 1921, who have heretofore applied or been eligible to apply for Yearly Renewable Term (War Time) Insurance, or United States

Government Life (Converted) Insurance may now be granted insurance in multiples of \$500, not less than \$1000 or more than \$10,000, upon application, proof of good health satisfactory to the Administrator and payment of the required premium. The maximum amount of insurance available is \$10,000, including any amount now in force or previously surrendered for cash."

If application is made for Government Insurance within 120 days after the applicant enters the service, no medical examination is required. Veterans of the World War applying for Government Insurance must undergo a complete medical examination. This applies also to all applicants for the Total Disability Insurance.

United States Government Life Insurance is free from restrictions as to residence, travel, occupation, military or naval service.

The low rates on Government Insurance are shown by the following extracts from the Premium Tables.

ORDINARY LIFE Monthly Premium per \$1,000 Insurance		Level Premiums for total Disability Provision when attached to a Life or En- dowment Insurance Policy for \$1,000 bearing the same effective date.	
		ORDINARY LIFE - FIVE YEAR LEVEL PREMIUM TERM (Premiums payable to age 65)	
Age	Monthly Payment	Age	Monthly Payment
17	\$1.08	17	\$0.12
18	1.10	18	.13
19	1.12	19	.13
20	1.15	20	.14
21	1.17	21	.14

Age	Monthly Payment	Age	Monthly Payment
22	\$1.20	22	\$0.15
23	1.23	23	.15
24	1.26	24	.16
25	1.29	25	.17
26	1.32	26	.18
27	1.35	27	.18
28	1.39	28	.19
29	1.43	29	.20
30	1.47	30	.21
31	1.51	31	.22
32	1.55	32	.23
33	1.60	33	.24
34	1.65	34	.25
35	1.70	35	.26
36	1.76	36	.27
37	1.81	37	.29
38	1.88	38	.30
39	1.94	39	.31
40	2.01	40	.33
41	2.09	41	.35
42	2.16	42	.36
43	2.25	43	.38
44	2.34	44	.40
45	2.43	45	.43
46	2.53	46	.45
47	2.64	47	.47
48	2.76	48	.50
49	2.88	49	.53
50	3.01	50	.57
51	3.15	51	.60
52	3.30	52	.64
53	3.46	53	.68
54	3.63	54	.73
55	3.82	55	.78
56	4.01	56	.83
57	4.22	57	.89
58	4.44	58	.95
59	4.68	59	1.03
60	4.94	60	1.11
		61	1.19
		62	1.29
		63	1.40
		64	\$1.51

Additional information on Government Insurance, as well as application blanks, are available to those interested by writing to the Veterans Administration, Washington, D.C., or to the Chief, Information Division, O.C.A.C.

COMMISSION IN AIR RESERVE FOR FLYING CADETS

A total of 53 Flying Cadets, who graduated from the Air Corps Advanced Flying School, Kelly Field, Texas, on February 28, 1934, and who for the past year served with Air Corps tactical units at various stations, completed their second year flying course on February 20th, and have been recommended by the Chief of the Air Corps for appointment as second lieutenants in the Air Reserve. Request has been made of the War Department to order these prospective Reserve officers to extended active duty with Air Corps tactical units, to begin on or about March 1, 1935. They are stationed at the present time, as follows:

Barksdale Field, Shreveport, La.

Eades, William	Lexington, Ky.
Hay, James Black	Waterloo, Iowa
Hinton, J.W.	Port Arthur, Texas
Keese, William Brewer	Wyoming, N.J.
Livingstone, Richmond A.	Pawtucket, R.I.
McMahon, George Robert	Huntington, W. Va.
Rodieck, Ralph Wm.	Palestine, Texas
Stone, Frank Copeland	Wichita, Kansas

Brooks Field, Texas

Altman, Dale Ellis	Gresham, Oregon
Clark, William Hogan	Golconda, Ill.
Holladay, Wendell Greer	Indianola, Iowa
Kester, Edson Eugene	Jacksonville, Fla.
Lerche, Andrew O.	Albany, N. Y.
Martin, Leslie Etheridge	Midlothian, Texas
Motley, Clifford	Norman, Oklahoma
Falmer, Albert Luther	Terrell, Texas
Pammis, William Walter	Philadelphia, Pa.
Pierce, Arthur Jenkins	Montague, Mass.
Pierce, George Everhill	Montague, Mass.
Stewart, John Philip	Riverside, Calif.

Hamilton Field, Calif.

Bryant, Alexander W.	Glendale, Calif.
Bullock, Cady Richmond	Beverly Hills, Calif.
Burton, Alexander Tennile	Venice, Calif.
Capp, William Charles	Morrill, Neb.
Ecklund, Sven Harold	Rhineland, Wis.
Kugel, Richard Charles	El Dorado, Texas
Luedicke, Alvin R.	Riverside, Calif.
McDermont, Verne Alexander	Los Angeles, Calif.
Moser, Glen Clume	Fountain, Colo.
Mundell, Lewis Leo	Denver, Colo.
Olmsted, Fay Walter	Fargo, North Dakota
Peterson, Clair Arthur	Modesto, Calif.
Proper, Louis William	Huntsville, Ala.
Root, Edgar Walthall	Mobile, Ala.
Sanford, George Samuel	Watertown, Mass.
Timper, Norman F.D.	Montgomery, Ala.
Virgin, Edward Warren	

March Field, Calif.

Ashman, Robert	Appleton, Wis.
Carter, James Thomas, Jr.	Spartanburg, S.C.
Clement, Browne	Thorndale, Texas
Cock, Frank Richardson	Denver, Colo.
Eisenhart, Donald W.	Culbertson, Nebraska
Gray, Fred Colbert, Jr.	Abilene, Texas
Hatcher, Wm. Albert, Jr.	Detroit, Mich.
Hilger, John Allen	Houston, Texas
James, Weldon Marion	Fort Worth, Texas
Penland, Hugh Holton	Berkeley, Calif.
Rendle, Irvine Alfred	Rawlins, Wyoming
Shafer, George Harold	Culbertson, Nebraska
Spicer, Henry Russell	Los Angeles, Calif.
Todd, Paul Engberg	Engberg, Texas
Turner, John Harold	Corning, Iowa
Wilson, Paul Boyer	Carlisle, Pa.

---oOo---

For the past five or six months, the 55th Pursuit Squadron, Barksdale, Field, La., has been flying P-26A's, and everyone is pleased with the airplane. In service tests on dive bombing and ground gunnery (standard straight approach) the very stable flight of the plane greatly facilitated sighting and some noteworthy scores were made.

PANAMA FLIGHT TRAINING AT ROCKWELL FIELD

Early on February 26th, the Panama Flight left March Field, Calif., en route to Washington, D.C., the official starting point of the long flight to the Canal Zone. The itinerary called for intermediate stops at Kelly, Maxwell and Langley Fields. A 40-hour check of equipment is scheduled to be made at Langley Field.

Prior to the take-off from March Field, the participating personnel were temporarily stationed at Rockwell Field to make preparations for the flight. On February 14th, three transports landed at Rockwell Field and unloaded officers, enlisted men and baggage, making the start of a ten-day period of training there before the flight across the continent to Washington.

The first few days were spent in getting acquainted with the B-12 Martin Bombers with their controllable pitch propellers, radio compasses, etc., as well as intensive training in instru-

ment flying under the supervision of the Advanced Air Navigation Training Unit.

On February 20th, the 12 Bombers, fully loaded with 817 gallons of gasoline, 64 quarts of oil, a crew of two men and sand bags to take the place of baggage, left Rockwell Field at 10:45 p.m., on an over water flight of 1200 miles. Proceeding out over the Pacific Ocean, the flight set a course for Hamilton Field, San Rafael, Calif., and after circling that field, returned to Rockwell Field over the same route, landing at 4:30 p.m.

The flight personnel were quite pleased with the functioning of their equipment and, after inspection on the ground, with the fine condition of same following the long flight. Members of the flight now feel that the 1150-mile flight over the water from Miami, Fla., to France Field, Panama, may be easily taken in their stride.

The flight reached Langley Field at 1:45 p.m., February 28th.

---oOo---

WAR DEPT. ORDERS AFFECTING A.C. OFFICERS

CHANGES OF STATION: To Langley Field, Va.: Major Adlai E. Gilkeson from duty with Organized Reserves, 8th C.A., Fort Sam Houston, Texas; Captains Eugene L. Eubank, Arthur K. Ladd and Malcolm N. Stewart, from Air Corps Tactical School, Maxwell Field; Captain Lawrence P. Hickey and 1st Lieut. Charles H. Howard, from Office of the Chief of the Air Corps, Washington, D.C.; Captain Clements McMullen from Maxwell Field; Captain John F. Whiteley from Wright Field; Captain Ennis C. Whitehead from Barksdale Field; 2nd Lt. Hugh F. McCaffery from Aberdeen Proving Ground, Md.

To Chanute Field, Ill.: 2nd Lieut. Daniel F. Callahan, Jr., from Panama; 2nd Lieuts. Wiley D. Canoy and Stuart P. Wright, previous orders in their cases revoked; 2nd Lieut. Earle T. MacArthur, Jr.

To March Field, Calif.: 2nd Lieut. Eugene H. Beebe, from Hamilton Field; Lieut.-Col. John H. Pirie, from Headquarters, 5th Corps Area, Fort Hayes, Ohio.

To Aberdeen Proving Ground, Md.: 1st Lt. Lloyd H. Full, from Langley Field.

To Barksdale Field, La.: 1st Lieut. Wm. P. Sican, from foreign service.

To Randolph Field, Texas: 1st Lieuts. Robert L. Easton and John F. Egan, from Hawaii; 1st Lieut. Bernard A. Bridget, from Panama.

To Pope Field, N.C.: 1st Lieut. Stuart G. McLennan, from Panama.

To San Antonio Air Depot, Duncan Field: 1st Lieut. Max H. Warren, from Panama.

To Mitchell Field, N.Y.: 2nd Lieut. Chas. B. Dougher, from Hawaii.

To Presidio of San Francisco, Calif.: Col. Roy C. Kirtland, from Hqrs. 2nd Corps Area, New York City.

To Rome, Italy: 1st Lieut. Thomas D. White, from Moscow, Soviet Russia, for duty as Assistant Military Attache and Assistant Military Attache for Air.

DETAILED TO THE AIR CORPS: 2nd Lieuts. Paul Birlingame, Jr., Infantry, and Horace L. Sanders, Field Artillery, and to Randolph Field, Texas, March 1, 1935, for flying training.

PROMOTION: 1st Lieut. Ronald A. Hicks to Captain, with rank from Feb. 1, 1935.

---oOo---

MANY APPLICATIONS FOR ENGINEERING SCHOOL

The Office of the Chief of the Air Corps has informally informed the Commandant of the Air Corps Engineering School of the names of 150 Air Corps officers who have stated on their preference cards a desire to attend the Engineering School. "It is thought exceedingly probable," says the News Letter Correspondent, "that many of these officers are not acquainted with AR 350-550, which provides that officers will be selected for detail for the course by the War Department upon recommendation of the Chief of the Air Corps, and that application to attend the School may be submitted at any time through military channels to The Adjutant General.

This submission of an application to attend the School is essential in that an application blank indicating the student's military and educational qualifications is required. At the present time officers of the Air Corps are being selected for attendance who have from three to seven years' commissioned service and who have the necessary engineering requirements. In addition to expressing a desire on a preference card for the School, it is essential that the formal application be made."

MEETING OF INSTITUTE OF AERONAUTICAL SCIENCES

Wright Field was well represented at the Annual Meeting of the Institute of Aeronautical Sciences which was held in New York City on January 29th and 30th. Capt. E. L. Powers, Lieut. F. D. Klein and Mr. Opie Chenoweth, of the Power Plant Branch, Captain F. M. Hopkins of the Air Corps Engineering School, and Mr. H. L. Carpenter, of the Electrical

Unit attended. Lieut. Klein and Mr. Carpenter presented papers on two outstanding Materiel Division developments, the former paper entitled "Aircraft Engine Performance with 100 Octane Fuel." and the latter, "Cold Temperature Starting of Air Corps Engines."

A brief resume of these papers is given below.

AIRCRAFT ENGINE PERFORMANCE WITH 100 OCTANE FUEL

By Lieut. Frank D. Klein

Prior to 1928, Air Corps engines operated with about 50 Octane Number Fuel. At present, fuel having an anti-knock value of 92 Octane by the Air Corps method of test is used in engines designed for maximum performance on such fuel, with a resulting increase in power output per unit weight of about 33-1/3 per cent.

Developments of the fuel industry made possible early in 1934 the production of commercial iso-octane on a large scale at a cost sufficiently low to make the outlook for Air Corps use of higher anti-knock fuels decidedly promising. Previously, prohibitive cost, limited availability and necessarily high lead content, resulting in excessive corrosion difficulties, had been limiting factors. The Air Corps, anticipating a need for 100 Octane fuel, prepared an experimental specification for such fuel on February 1, 1934. One thousand gallons of commercial iso-octane were procured in May, 1934, to be blended with a sufficient quantity of a good quality of aviation gasoline, to make 2,000 gallons of 100 Octane fuel, an amount sufficient for experimental multi-cylinder engine tests to determine the increase in power output possible with such fuel.

After serious consideration of physical properties and anti-knock value of fuels available, four were selected as the most interesting for comparison with Air Corps fuel of 92 Octane rating. Each of these had an anti-knock value of 100 Octane and conformed closely to specification requirements except in tetraethyl lead content. A Wasp at 2200 r.p.m. and Cyclone engine at 1950 r.p.m. were used for the tests.

On the Wasp engine, constant throttle mixture control runs and constant specific fuel consumption variable throttle runs were made. On these variable throttle runs, the throttle was opened progressively until the maximum allowable cylinder temperature of 550° F. was reached. In the mixture control runs, three of the four 100 Octane fuels appeared superior to the 92 Octane fuel, some irregularity in engine operation causing uncertainty concerning the test of the fourth 100 Octane fuel. In the

variable throttle, specific fuel consumption run at approximately .55 pound per brake horsepower per hour, two of the 100 Octane fuels appeared slightly superior to the other two and showed 620 h.p. as compared with 510 h.p. for the 92 Octane fuel, a 21.6 per cent increase.

On the Cyclone engine, constant specific fuel consumption, variable throttle runs were made with each of the five fuels at approximately .60 pound per brake h.p. per hour. The throttle was opened progressively in each case until the engine suddenly became very rough and cut out. This occurred before excessive cylinder temperatures were reached. Under these conditions the 100 Octane fuels showed a power output of approximately 800 h.p. as compared to 610 h.p. with the 92 Octane fuel, a 31 per cent increase.

With engines designed with high compression ratio and high degree of supercharge specifically for operation on 100 Octane fuel, still greater gain in performance should be obtained.

In several instances in testing Pursuit planes at Wright Field, 100 Octane fuel made possible full throttle operation over the speed course, and completion of rate of climb checking without overheating of cylinders, where with 92 Octane fuel the test could not be completed. Also, in the Mitchel Trophy Race held at Selfridge Field in 1934, 100 Octane fuel was successfully used to increase power output and raise the speed of the race. This permitted the airplanes to operate with a reasonable margin of safety at considerably higher speed, and no detonation was evident to the pilots.

In this race, which is limited to standard service type Pursuit planes, the winner averaged a speed of 216.8 miles per hour.

The marked increase of 15-30 per cent in power output with 100 Octane fuel over that obtainable with 92 Octane Number anti-knock value clearly demonstrates the extreme desirability from a military standpoint of adopting this fuel as a means of greatly increasing engine performance with relatively little increase in weight, provided that engines are designed to take full advantage of them.

NOTES FROM AIR CORPS FIELDS

San Antonio Air Depot, Texas, Feb. 20th.

During January, 1935, the Engineering Department of this Depot overhauled a total of 27 planes and 48 engines, and repaired 18 planes and 30 engines of various types.

The regular monthly conference and luncheon at this Depot for discussion of supply and engineering matters in this Supply Area was held on February 5th and was attended by the following Air Corps officers: Captains Ferry Wainer, C.C. Nutt and T.L. Gilbert, Kelly Field; Captain Alfred Lindeburg, Fort Crockett; Captain F.D. Lynch and Lieuts. C.R. Storrie and J.F. Thompson, Jr., Brooks Field; Captains H.A. Bartron and E.R. McReynolds, Randolph Field; Captain Paul C. Wilkins and Lieut. H.F. Gregory, Fort Sill, and Lieut. Gilger, Barksdale Field.

This conference was also attended by Capt. Max F. Schneider, Chief of the Inspection Division, Office of the Chief of the Air Corps, and the three Technical Supervisors, Captains H.A. Bivins, F.A.D. Control Area; B.J. Tooher, M.A.D. Control Area, and A.S. Albro of this Control Area, who were attending the annual Inspection Division Technical Conference then being held here; also by Captain C.A. Horn, Air Corps Instructor with the Arkansas National Guard, who was visiting this Depot on an airplane ferrying mission.

Lieut. Richard T. Aldworth, U.S.A. Retired, Superintendent of the Municipal Airport, Newark, N.J., was a recent visitor and greeted many old friends here. He flew to San Antonio in a Beachcraft 4-place plane, his mother being reported very ill.

Lieut. Aldworth will be remembered as one of the foremost pilots of the Air Corps prior to his retirement. He was on duty at this Depot for a number of years and retired December 16, 1929, for disability in line of duty.

Officers ferrying airplanes to or from this Depot recently were Capt. W.B. McCoy, A.C. Instructor, Tenn. National Guard; Capt. Y.A. Pitts and Lieut. E.H. Rice, Air Corps Detachment, Fort Leavenworth, Kansas; Lieuts. L.P. Holcomb, Air Corps, and D.K. Smith, Air Reserve, Scott Field, Ill.; and Lieut. R.N. Read, Air Reserve, Langley Field, Va.

Hamilton Field, San Rafael, Calif. Feb. 20th.

A squadron of P-26A Pursuit planes from March Field was scheduled to fly in the National Defense Parade in San Francisco on Washington's Birthday, following which the planes were to land at Hamilton Field for public inspection.

First Lieut. Walter R. Agee was forced down at Bakersfield recently due to a low ceiling. Piloting an air transport to Rockwell Field with five enlisted men who were assigned to the Panama Flight, he discovered a leak in the gas tank after landing. Patching up the leak, he took off for Rockwell Field the following day and arrived safely.

Private Ryder W. Finn, 11th Bombardment

Squadron, left recently for Hamilton Field to receive appointment as a Flying Cadet.

Private Paul W. Lawrence, 31st Bomb. Sqdn., is to undergo an examination in April for a Flying Cadet appointment.

Flying Cadet Glen C. Moser, with Pvt. Gerald S. Reynolds as passenger, completely washed out a PT-3 on Feb. 6th, about 6 miles north of Hamilton Field. The motor cut out completely, and Cadet Moser was headed directly for a canal embankment at the completion of the forced landing. However, he was able to slip the plane into the ground on the right wing tip to avoid the head-on collision. Only minor bruises were suffered by pilot and passenger.

Second Lieut. Edward W. Suarez, appointed E. & R. Officer and Post Parachute Officer during the temporary absence of 1st Lieut. Charles B. Stone, III, is also commander of the 31st Bomb. Squadron during the absence of Capt. Harold D. Smith on the Panama Flight.

Cpts. Don L. Hutchins, Junius P. Smith and 2d Lt. Millard Lewis were appointed to conduct the preliminary examination of applicants for commissions as 2nd Lieutenants in the Air Corps, Regular Army.

113th Obs. Sqdn. Ind. Nat'l Guard, Indianapolis

The members of the Squadron wish to thank our Air Corps friends for their kind expressions of sympathy in our recent great loss of Lieuts. Henderson Wheeler and Richard Miller.

We feel quite proud of the interest shown in us by the Illinois Squadron at Chicago who flew a 5-ship formation down to witness our annual inspection, after which they took off for a night formation flight home. Lt. Russell Daniels from our Squadron moved to Oak Park, Ill., and was given a commission in the Illinois Squadron. We hope he will be as valuable to them as he has been to us.

Our Communications Section is putting the finishing touches on a short wave radio transmitter to be known as W9JKG. We hope this radio station will bring us in closer touch with the other Air Corps stations and also facilitate our communications training.

Let us remind all Air Corps units that the date of the annual 500-mile speedway race is not far off, and this affords a splendid opportunity for a visit to our station with a National Classic thrown in. We will consider it a pleasure and a privilege to furnish transportation and lodging for visiting officers, so make a date with us for Memorial Day.

Brooks Field, San Antonio, Texas, Feb. 19.

Twelve Flying Cadets were slated to be commissioned in the Air Reserve on February 20th, and ordered to active duty the following day, viz: Dale E. Altman, William H. Clark, Wendell Holladay, Edson E. Kester, Andrew O. Lerche, Leslie E. Martin, Clifford Motley, Albert L. Palmer, William W. Pannis, Arthur J. Pierce, George E. Fierce, John P. Stewart.

Brooks Field will receive 12 Flying Cadets V-6732, A.C.

from the graduating class at Kelly Field, to report here immediately after graduation, viz: Thomas Bartley, Jr., George S. Brewer, John B. Cornett, William I. Fernald, Frank V. Haynes, Arthur V. Jones, Jr., Francis H. MacDuff, Norman L. Peterson, William Q. Raukif, Jeff A. Smith, Lloyd A. Waler, Jr., and Tracy R. Walsh.

The following personnel at this station will undergo the competitive examination from which 30 Regular commissions will be awarded:

Lieuts., Air Reserve, Robertson, Harcos, Moore, Hooks, Bateman, Collier, Endress, Denison, Rivard, Holloway, Fahey, Pippinger, Hausafus, Dross, Ellis, Moomaw, Fryce; Flying Cadets Holladay, Clark, Lerche, Motley, Altman, Martin, Kester, Pannis, G.E. Pierce, A.J. Pierce, Falmer, Staff Sgt. Blair, Privates Poupitch and Wackwitz.

Those not from Brooks Field who will be examined at this station include Lieuts., Air Reserve, Tibbs, Miller, C.L., Miller, C.A., Joyce, Malone, Kristofferson, Rafferty, Gebelin, Jr., Bordelon, Crutcher, Jr., J.F. Davidson, Fisher, Sartain, Prossen, Northrup, Chambers, McRay, Fauche, Jr., and Staff Sgt. O.E. Henderson.

Scott Field, Belleville, Ill., Feb. 20th.

Several changes in officer personnel occurred recently and are listed below:

Capt. Karl S. Axtater reported from Panama and was assigned to the 9th Airship Squadron; Capt. H.H. Carr is now at Rockwell Field completing the Air Navigation Training course; Capt. Rafael Baez, Jr., ordered from Hawaii, is now on three months leave and is due to report July 1st; 1st Lieut. Walter A. Fenander departed for Hawaii, as did Chaplain James G. De La Vergne; Capt. F.A. Johnson was ordered to his home to await retirement; 2nd Lieut. Irving R. Selby was ordered to sail for Panama.

The Scott Field Basketball team, guided by 1st Lt. W.L. Ritchie has gotten well under way, turning in six wins and three losses to date. The only Service tilts were two games with Chanute Field, honors being even. A heavy schedule was prepared, including local independent and Service teams. With a wealth of young but promising basketball material, a smooth, fast working combination should be developed.

The Post Championship was annexed again this year by the 24th Airship Service Squadron, after an exciting finale with the 9th Airship Squadron.

Scott Field boxing has gotten off to a flying start with four men entered in the District Golden Gloves Eliminations. Athletics in general have taken on a decided impetus with the organization of the Scott Field Athletic Association.

120th Obs. Sqdn. Colo. National Guard.

The sun continues to shine in Colorado, and the 120th Observation Squadron has carried out Operations Orders with practically no bad weather flying. We are accustomed to good flying weather and very seldom suspend operations because of inclement weather.

Considerable interest is being shown in a letter from the War Department, Chief of the National Guard Bureau, Jan. 29th, relative to Non-Pilot Observers. Several of the noncommissioned officers are taking the necessary action to obtain their commissions, and we are going to see several new faces in the commissioned officers' ranks soon. We have several qualified Observers among the NCO's who will be a credit to the Squadron.

On Feb. 8th, two airplanes from the Squadron assisted the 328th Engineers, who were in training at Fort Logan, in their problems relative to "Security on the March" and "Security against Aircraft," for which they were highly praised by Colonel Charles Larsen, commanding officer of that unit.

118th Obs. Sqdn., Connecticut Nat'l Guard.

An extended training flight in an O-38E from Hartford, Conn., to Brownsville, Texas, and return, was recently accomplished by Lieuts. Pincomb and Wiley. They departed Jan. 22nd for Dayton, O., via Buffalo, N.Y., choosing that route because of weather conditions which had by the following night developed into a blizzard over this area. The Dayton-Scott Field leg was flown that night along the lighted airway. The next day the pilots flew to Fort Crockett, Texas, where they spent the night and were hospitably entertained by old friends of flying school days. Brownsville was reached the next day and a pleasant and instructive period of three days was spent in inspecting the equipment and activities of the Pan-American Airways system.

A discussion with several of the Company's pilots relative to the problems encountered in flying operations in Central America provided the Guardsmen with much interesting information.

Doubtful weather in the Red River Valley delayed the return departure for Dallas, via Fort Crockett, until Jan. 29th. A possibly dangerous situation was avoided by means of the radio after departing from Dallas for Kansas City when the fliers, while in the vicinity of Ponca City, received a Dept. of Commerce weather broadcast stating that Kansas City had suddenly fogged in. The course was changed to Wichita, Kansas, and the night spent there. The following day the fog lifted at Kansas City long enough to permit the flight to be continued to that point and then closed down again for two days. On Feb. 2nd, the Connecticut men flew to Scott Field, the next day to Auburn, Ind., and the following day to Hartford.

The two airmen were highly pleased with the uniformly courteous and excellent service afforded them by all Army and Commercial fields along the route, and particularly commend the Department of Commerce weather broadcasting service.

Barksdale Field, Shreveport, La., Feb. 15.

The 55th Pursuit Squadron, 1st Lieut. C.E. Crumrine, Squadron Commander for some time, has transferred to Maxwell Field, Ala., and
V-6732, A.C.

1st Lieut. Earl W. Barnes is now in command.

At the present time, this Squadron has about two pilots per airplane. The following is a roster of officers assigned to this Squadron: 1st Lieut. James A. Ellison, 2nd Lieuts. A.C. H.N. Burkhalter, Jr., R.L. Carter, H.K. Mooney, Sory Smith, Dean C. Strother, Felix L. Vidal; 2nd Lieuts., Air Reserve: John V. Borden, Quinn M. Corley, Dudley S. Cox, Jay L. Gentry, Henry L. Hoxie, Philip B. Klein, Arthur R. Kingham, Jeff C. Mock, William I. Sanders, Marion D. Unruh. The following Cadets are attached for flying: J.L. Cunningham, F. R. Drake, William Eades, J.W. Hinton, W.B. Keese, O.K. Lawing, R.A. Livingston and G.V. Minnis.

Squadron training during the last month was confined largely to preparation of equipment and instruction of pilots incident to the one month aerial gunnery practice and field exercises at Chapman Field, Fla. Due to the shortage of equipment, only the following officers and cadets will participate in this flight: 1st Lieut. Earl W. Barnes, 2nd Lieuts. Dean C. Strother, Sory Smith, H.K. Mooney, Robert L. Carver, Felix Vidal, Henry L. Hoxie, Flying Cadets J.W. Hinton, R.A. Livingstone, William B. Keese, William Eades and J.L. Cunningham.

The 79th Pursuit Squadron, like the rest of the organizations in the 20th Pursuit Group, will be somewhat depleted during the month February 15 to March 15, having sent 14 pilots and 18 enlisted men to Chapman Field for maneuvers. The Squadron Commander, Capt. Camblin, will lead the detachment to Miami, and the Squadron will be commanded by Captain Whitehead during the absence of Captain Camblin.

Flying will be somewhat restricted since only three P-12's are left, together with two A-8's and two PT-3A's, the rest of the P-12's being sent to Miami.

Other activities, however, will be carried on as usual. Squadron athletics will be carried on to build strong teams to win, if possible, the track and baseball championships.

The basketball defeat at the hands of the 77th Pursuit Squadron kept the 79th from winning the Group Championship.

Two men from the Squadron, Strubbe McConnell from Shreveport and Howerton, from Oklahoma, were sent to Randolph Field to undergo training as Flying Cadets. Here's to them and the best of luck.

March Field, Riverside, Calif., Feb. 5th.

Lieut.-Colonel H.H. Arnold, Commanding Officer of March Field, returned from Alaska with something more than a knowledge of the terrain of the Great Northwest. He was reminded by the Canadians at one of their social functions given in his honor of the fact that they have some worth while customs designed to give entertainment, break the tedium of ordinary military service and at the same time to preserve and promote some of the spirit and morale of the "Old Army."

Shortly after his return from the Alaskan Flight, Col. Arnold instituted at March Field

what has come to be called "Wing Night." It is a stag affair at which all officers and cadets appear in uniform, have a formal dinner and follow some of the old customs both of our own Army, in its earlier days, and the British Army. After the formal dinner, a program of hi-jinks, vaudeville, frivolity and fun is given by selected officers for the amusement and entertainment of the others. Needless to say, presentation of the "Dumb-Bell" Trophy finds a place in the latter stages of this program.

These Wing Nights have come to hold a prominent place in semi-social activities of the command and play a big part in building up morale.

116th Obs. Sqdn., Washington National Guard.

Uncle Sam's invitation for additional officers in the Regular Army Air Corps has proven attractive to seven former Regular Army pilots now residing in the vicinity of Spokane, Wash. In the Headquarters building of the 41st Division Aviation, Wash. National Guard, on Feb. 20th, preliminary examinations were given by a board composed of Col. Frederick Knabenshue, Commanding Officer, 4th Infantry Regiment, Lt. George Wright; Major Robin A. Day, Instructor, 41st Div. Aviation, and Capt. John Walters, Division Aviation Flight Surgeon.

Two of the seven applicants are pilots with the United Air Lines, while two are members of the 116th Obs. Sqdn. Applicants for return to the Regular Army Air Corps include: Byron S. Cooper, 2nd Lt., now a member of this squadron, who graduated from the Advanced Flying School in 1927 and has had more than two years of Regular service - Emmett J. Corrigan, 2nd Lt., 116th Sqdn., who is a graduate of the Advanced Flying School in 1932 and had two years of active duty. Lieut. Corrigan attended Gonzaga University, Spokane, for two years - Richard Morden McGlinn, 1st Lt., now a pilot for the United Air Lines, who is a resident of Spokane, graduated from the Advanced Flying School in June, 1930, and had an 18 months' tour of active duty in the Air Corps - William Garfield Ditzen, 2nd Lt., a resident of Spokane, pilot on United Air Lines, graduate of the University of Calif., as well as the Army Advanced Flying School, and who had 18 months of active duty - David Reynold Nelson, 2d Lieut., a resident of Moscow, Idaho, who graduated from the University of Idaho and from the Advanced Flying School, Class of June, 1931, and had one year of active duty - John Ormond Mosman, 2nd Lt., a resident of Moscow, Idaho and graduate of the University of Idaho and from the Advanced Flying School, Class of June, 1932, and had a one year tour of active duty.

Final examinations will be held April 2nd, and possibly at Felts Field, Spokane, provided the class of candidates is large enough.

Six radio sets of an "unknown make" will be delivered to the 41st Division on April 1st, according to advice received by Major Robin A. Day, Instructor. Five sets are for the Douglas O-38 Observation planes, while the V-6732, A.C.

other set is for the ground station. This equipment with the two present SC 134 sets, and will mean that all but one airplane will be radio equipped.

Maxwell Field, Montgomery, Ala., Feb. 20th.

Capt. John R. Tighe, Quartermaster Corps, Constructing Q.M. at the field for the past 14 months, departed Feb. 1st on leave of absence prior to his reporting at New York to sail for duty in Hawaii.

It has been under the direction of Captain Tighe that the completion of all the new construction at Maxwell Field was made possible. He is responsible for the expenditure of one and one-half million dollars since his arrival here in December, 1933, and has completed 25 new officers' quarters with garages, 20 new double sets of noncommissioned officers quarters with garages, a new Quartermaster Warehouse, a new addition to the Fire Department, the new Headquarters Air Corps Tactical School Barracks, Hangars Nos. 5 and 6, new film vault building, addition to Austin Hall, new Quartermaster Gasoline Station, street lighting system and roads and sidewalks throughout the post.

A visit to our Post will convince anyone that it is one of the most modern and beautiful in the Air Corps today, and all construction done here since December, 1933, was under Capt. Tighe's supervision. He has devoted his entire time and efforts to these vast projects, and the results obtained bear eloquent testimonial to his industry and application to duty.

Capt. Tighe is a graduate of the Quartermaster School, Administrative Course, 1932, and the Quartermaster School, Motor Transport School, 1928. He was first commissioned in the Army as a 2nd Lieut. of Infantry in 1917, and received his appointment as Captain in the Q.M.C., November 7, 1928. He came to Maxwell Field from Fort Bragg, N.C., and immediately assumed his duties as Constructing Quartermaster.

Capt. Kinsley W. Slauson, Q.M.C., now Post Q.M. at the field, has assumed the duties of Constructing Quartermaster.

Edwin M. Gavin and James H. Price, both graduates of the Advanced Flying School, enlisted at Maxwell Field. Both are taking the examination for Regular Army commissions. Both of these Reserve officers served on active duty tours with Air Corps organizations.

Staff Sgts. Ray W. Clifton, John H. Williamson, Sgt. Wm. C. McDonald, Jr., and Pvt. Russell L. Waldron, all enlisted pilots at this station, are taking the examination.

Lieut. Ralph Snavelly was appointed Post Operations Officer. He relieved Capt. Claire L. Chennault, Pursuit Instructor at the Tactical School, who can now devote his entire time to his duties as instructor.

Major Harmon, leading a flight of 43 airplanes, arrived at this station on Feb. 15th. He and his flight, consisting of 34 officers, 8 Flying Cadets, one enlisted pilot and 17 enlisted mechanics, remained overnight and departed the next morning for Chapman Field, Miami, to participate in gunnery exercises for

a period of 30 days.

General Westover and Sgt. Hynes in an O-38 airplane, arrived here Feb. 4th from Barksdale Field, enroute to Bolling

For the first time this year Maxwell Field has become bowling conscious, and a team representing the field has engaged in some serious pin splitting. All members of the team bowl an average of over 185 and are veterans at the game. Arrangements are under way for a match with the strong Fort Benning team.

The 54th School Squadron, in its last intersquadron game this season, defeated the Headquarters team, 38 to 29. This victory gave the 54th Basketeers a 100% record for the year in basketball. It is expected that every member of the team, which includes Capt. "Sammy" Nelms, Buie Hess, Jack Curtiss, Earl Knight and Lester Hamrick, will be selected for the Post Team to represent it on tours around this part of the country. Games have been scheduled with outside civilian teams.

---oOo---

SOME OF THE MORE INTERESTING BOOKS AND DOCUMENTS RECENTLY ADDED TO AIR CORPS LIBRARY

Available for loan to Air Corps organizations only upon request to the Air Corps Library, Munitions Building, Washington, D.C.

A 40.3/43 U.S. Air Corps. Rockwell Field, Calif. Celestial Navigation, 1934. 44 f. 47 diags. 25 cm. Above is written in simple language and manner suitable for beginner.

D 52.41 Bristol Aeroplane Co., Ltd. Moteurs Bristol d'aviation "Bristol" Mercury et 32 Pegasus. Filton, Eng., 1935. 16 p. incl. illus. 25cm. French text.

D 52.41 Rolls-Royce, Ltd. Rolls-Royce Aero 8 Engines. London, Eng. 3 p. incl. illus. 33cm. Text in French and English.

D 52.41 Walter, S.A. Moteurs d'aviation, 1935, Walter/1 Prague. Caption title, 16 f. incl. illus. diagrams, 23cm. French text.

629.13 France. Air Ministry. Aeronautical Un3me technical services. Louis Kahn con- No.302 formal orthodromic transcontinental itineraries; aerial and naval navigation maps published with the assistance of the Services techniques de l'aeronautique (1934). Dayton, 1934. 31 f. incl. maps, diagrams. 28 cm. (U.S. Air Corps Trans. 302.) Tr. by Materiel Div. from the French.

629.13 Leglise, Pierre. Ascent to the strato Un3me sphere of the "Explorer." Dayton, Feb No.303 4, 1935. 23f. 28cm. (U.S. Air Corps Trans. 303). Tr. by Materiel Div. from "L'Aeronautique", No. 185, Oct. 1934, and No. 186, Nov. 1934. Refers to the flight of Major Kepner and Captain Stevens.

INSPECTION DIVISION NOTES

A National Guard Air Corps unit recently submitted an Unsatisfactory Report on safety cap outlet indicators for CO₂ fire extinguishers stating that a short time after installation the caps, in the majority of cases, are found broken and extremely dry and brittle, although in each case it was determined that no leakage occurred. The following remarks are extracted from the Materiel Division reply to the Unsatisfactory Report:

* * * * *

"2. For your information, it has been found that by keeping these caps in the formaldehyde solution the glycerine in the caps is extracted, making them very brittle. In checking this matter with the contractor, information has been received that these caps may now be purchased in the dry state. They are to be soaked in water for 45 minutes just before installation. Technical Order 16-20-2 is being amended to provide for this new method of installation. A quantity of the caps in the dry state have been procured and are now available at the Fairfield Depot. The stock of caps in the formaldehyde solution will be disposed of.

"3. A copy of the change in the Technical Order should be received within the next twenty days."

- - - - -

Replies to a questionnaire sent recently to a number of Air Corps activities indicated a general impression that the existing requirement that starter brushes, brush holders, and springs be inspected twice each 20 hours at intervals of 10 hours, was excessive. In view of the opinion of the Service activities contacted, the Materiel Division will shortly amend Page 10, Section IV, Technical Order No. 02-1-32, to provide that the above parts be inspected at intervals of 40 hours, instead of twice each 20 hours.

- - - - -

A report received recently from an Air Corps station states that after flushing a tank on a field servicing truck to remove scale and sediment on completion of repairs to the truck, the personnel flushing the tank failed to completely drain the lines leading from the segregator to the servicing hose, with the result that water remained in these lines. Attention is invited to the fact that, when operating properly, the segregator will eliminate water in the tank, or in the lines leading from the tank to the segregator, but will obviously not eliminate water in the lines between the segregator and the discharge nozzle.

- - - - -

From numerous informal reports received from individual pilots, it is apparent that maintenance personnel caring for transient aircraft continue to be deceived by the "foam" that frequently exists in aircraft oil tanks immediately after the engine is stopped. In several instances the error of servicing personnel in mistaking "foam" for oil has resulted in underservice as great as sixteen quarts. This error most commonly occurs when visiting aircraft stop only long enough for service and take-off is made as soon as service is completed.

- - - - -

An inspection of Forms No. 1 indicates that frequently maintenance personnel are making the pre-flight inspection of the quantities of fuel and oil in the aircraft fuel and oil tanks at the close of the maintenance day instead of immediately prior to the first flight of the day. Existing instructions require that the quantities of fuel and oil in the tanks be checked immediately before the first flight of the day, and that after the

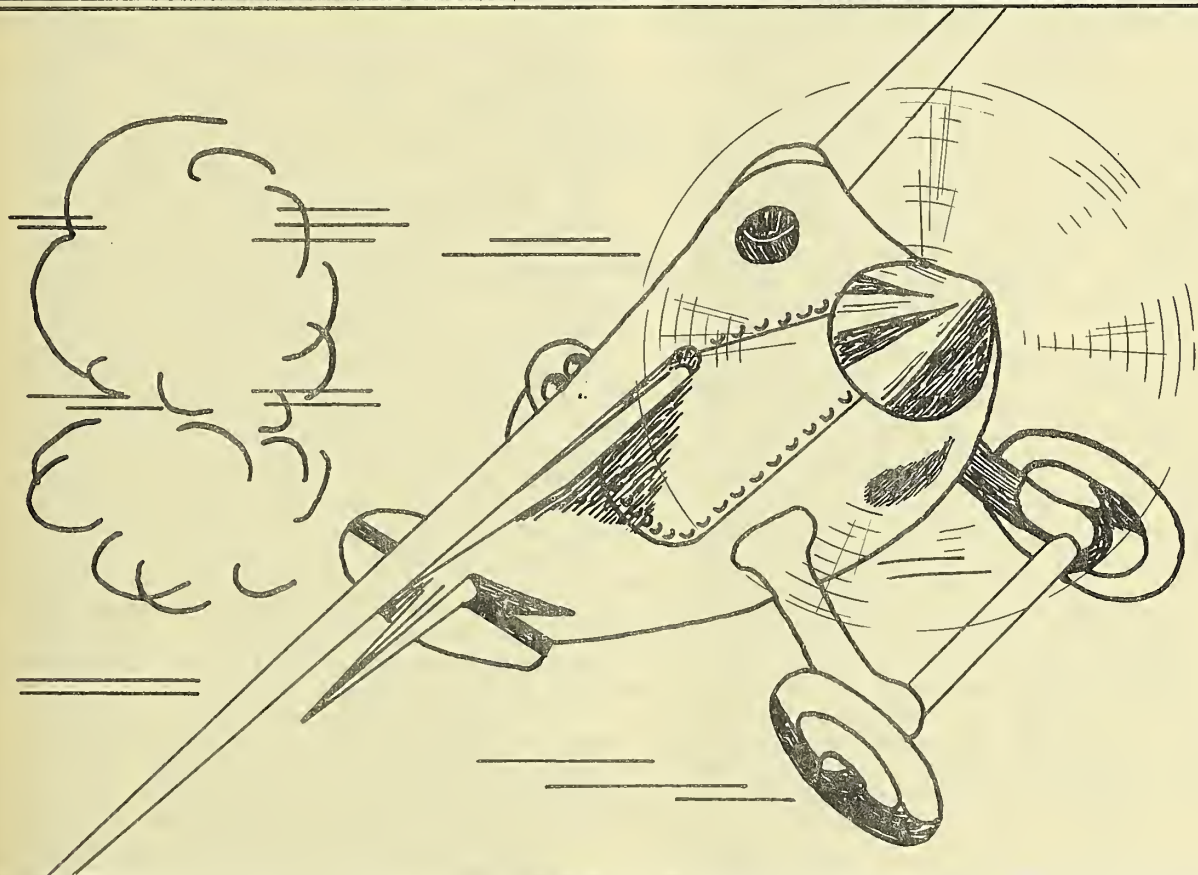
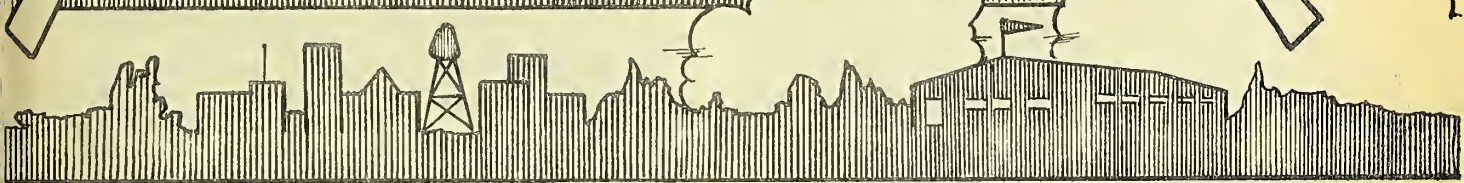
quantities have been determined, they be recorded in Column 2 on the face of Air Corps Form No. 1.

- - - - -

Paragraphs 7 c and 7 g, Air Corps Circular 15-1, dated February 1, 1934, require that under certain conditions the officer in charge of transient aircraft maintenance sign the Exceptional Release on the reverse of Form No. 1, if a release is necessary for a transient airplane. This requirement is included to insure that local authority is aware of any failure on the part of the transient aircraft maintenance crew to properly maintain or repair transient aircraft.

- - - - -

AIR CORPS NEWS LETTER



ISSUED BY THE OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT, WASHINGTON, D.C.

THE NEW YORK PUBLIC LIBRARY



ASTOR LENOX TILDEN FOUNDATION
1900

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

BRIG.-GENERAL ARNOLD AGAIN WINS THE MACKAY TROPHY

The Secretary of War announced that the Mackay Trophy for 1934 has been awarded by the War Department to Brig.-General Henry H. Arnold, Air Corps, in recognition of his leadership as Commanding Officer of the U.S. Army Alaskan Flight of last year.

It is interesting to note that this same officer was the first winner of the Mackay Trophy in 1912, back in the early days of aviation. He was then a 2nd Lieutenant, 29th Infantry, detailed to the Aviation Section of the Signal Corps.

General Arnold received the first award for a reconnaissance flight he made on October 9, 1912, from College Park, Md., then the site of the Signal Corps Aviation School, over the triangle Washington Barracks, D.C., Fort Myer, Va., and return to College Park. He piloted the early type Wright biplane, powered with a 40 horsepower engine revolving two propellers in tandem by the chain and sprocket method. The instability of this airplane may be judged from the fact that, upon landing at College Park following the completion of his 41-minute flight, Gen. Arnold's appearance, according to reports, was that of "physical exhaustion and nervousness." He stated that on account of adverse atmospheric conditions during the flight, he was forced to center all his attention to controlling the airplane and was unable to look at the map which he carried in the seat alongside him. He further stated that his altitude on this flight varied from 1400 to 2800 feet, necessitated by the "strong, puffy and gusty wind."

Much water has passed over the dam during this span of 23 eventful years in the progress of military aviation, and in the proceedings of the Board of Air Corps officers, consisting of Lieut.-Colonel Arnold W. Krogstad, Majors Carl Spatz, Frank D. Lackland, Vincent B. Dixon and Lieut. Thomas M. Lowe, convened for the purpose of making recommendations to the Chief of the Air Corps on the award of the Mackay Trophy for 1934, it is stated that of the various flights made during that year, the U.S. Army Alaskan Flight, commanded by Brig.-General Arnold, was the most meritorious.

Major-General Benjamin D. Foulois, Chief of the Air Corps, approved this

recommendation.

It is a far cry from the early Wright biplane in 1912, limited to a speed of approximately 40 miles per hour, to the new Martin B-10 Bomber, which in various test flights made by Air Corps pilots, had attained speeds varying from 170 to 243 miles per hour, the last figure representing an outstanding air mail flight from Cleveland, Ohio, to Newark, N.J., when the pilot was favored with a tail wind.

The Alaskan Flight, participated in by 14 officers and 16 enlisted men, utilizing ten B-10 Bombers, involved a total distance estimated at approximately 8,290 miles. The Flight took off from Bolling Field, D.C., on the morning of July 19, 1934, and proceeding via Dayton, Ohio; Minneapolis, Minn.; Winnipeg, Manitoba, Canada; Regina, Saskatchewan; Edmonton, Alberta; Prince George, British Columbia, and White Horse, Yukon Territory, reached Fairbanks, Alaska, on the morning of July 24th.

This flight was made according to prearranged schedules, thus successfully demonstrating that Air Corps units could be moved by air from the continental United States to the Territory of Alaska in the event of an emergency.

During the stay in Alaska, members of the Flight successfully executed an aerial survey of that Territory and photographed from the air a total of 20,800 square miles of Alaskan territory in the space of three days.

The return trip to Washington, D.C., featured a mass non-stop flight from Juneau, Alaska, to Seattle, Washington, a distance of 950 miles, thereby for the first time linking the territory of Alaska with the United States by air, without a stop on foreign territory.

The Mackay Trophy was presented to the War Department in 1912 by Mr. Clarence H. Mackay, and every year thereafter, except during 1916 and 1917, it was awarded annually to Air Corps officers for each year's most outstanding flight.

Throughout this period of almost a quarter of a century, General Arnold, one of the Army's pioneer aviators, has been intimately associated with aviation and he has seen it emerge from its swaddling clothes to its present impor-

tant position both in the commercial as well as the military field.

Associated with the Trophy are some of the most noteworthy flight achievements of the Air Corps, among which were the expedition of four DeHaviland planes from New York to Nome, Alaska, and return, in 1920, headed by Captain St. Clair Streett; the record-breaking altitude flight of Lieut. John A. Macready in 1921; the record-breaking duration flight of Lieuts. Macready and Oakley G. Kelly in 1922, and their non-stop transcontinental flight the following year; the Around-the-World Flight, headed by Captain Lowell H. Smith, in 1924; the Pan-American Flight around South America, led by Major Herbert A. Dargue, in 1926; the non-stop flight from Oakland, Calif., to Honolulu, T.H., by Captains Albert F. Hegenberger and Lester J. Maitland in 1927; extremely hazardous spinning tests by Lieut. Harry A. Sutton in 1928; remarkable long-distance and high altitude photographic flights by Captain Albert W. Stevens in 1929, and the mid-winter flight of the First Pursuit Group, under Major Ralph Royce, from Selfridge Field, Mich., to Spokane, Wash., and return, in 1930, under most adverse weather conditions.

In addition to General Arnold, other early Army fliers still in active service who won the Mackay Trophy are Majors Shepler W. FitzGerald and Byron Q. Jones, both of whom are at present members of the War Department General Staff. Major FitzGerald shared the award for 1914 with the late Captain Townsend F. Dodd for a reconnaissance flight over San Diego, Calif. Major Jones, recipient of the 1915 award, established an American duration record with a solo flight of 8 hours and 53 minutes.

Second Lieuts. Joseph E. Carberry and Fred Seydel received the award for 1913 for a reconnaissance flight over San Diego, Calif.

Colonel Edward V. Rickenbacker, premier American "Ace," was awarded the Trophy for 1918 for his extraordinary achievement in bringing down 25 enemy aircraft during the World War.

For the year 1919, the award was made to Captains Lowell H. Smith, John O. Donaldson, Felix Steinle, Lieuts. Belwin W. Maynard, Alexander Pearson, R.S. Worthington, E.M. Manzelman, R.G. Bagby, D.B. Gish and Lieut.-Colonel Harold E. Hartney for their flights between the Atlantic and Pacific Coasts and return.

Those who shared with Captain Streett in the 1920 award were Lieuts. Clifford C. Nutt, Eric H. Nelson, C. E. Crumrine, Ross C. Kirkpatrick, Sgts. Edmond Henriques, Albert R. Vierra and Joseph

E. English.

The personnel of the Around-the-World Flight who shared with Captain Lowell H. Smith the award for 1924 were Lieuts. Eric H. Nelson, Leslie P. Arnold, Leigh Wade, John Harding and Henry H. Ogden.

The personnel of the Pan-American Flight, under the leadership of Major Dargue, were Captains A.B. McDaniel, Ira C. Baker, C.F. Woolsey, 1st Lieuts. B.S. Thompson, L.D. Weddington, Charles McK. Robinson, Muir S. Fairchild, Ennis C. Whitehead and John W. Benton.

Major-General Benjamin D. Foulois, Chief of the Air Corps, received the award for 1931 for his flight leadership during the Air Corps Maneuvers that year, which constituted the largest concentration of airplanes flying in military formation in the history of the Air Corps.

The Navajo Indian Relief Flight was adjudged the most meritorious one in the Air Corps in 1932, and the award was made to 1st Lieut. Charles H. Howard as Commander of the 11th Bombardment Squadron and representative of this organization in this flight. Eight Bombardment airplanes from this Squadron were flown over dangerous mountains and canyon regions for the period of nearly a week, and food dropped over various villages inhabited by the Navajo Indians, who suffered hunger and other privations through being isolated from surrounding communities due to a snow storm unusually severe in its intensity.

First Lieut. James H. Doolittle, now a Major in the Air Reserve, shared with the late Lieut. Cyrus Bettis the award of the Trophy for 1925. In October of that year, Lieut. Bettis, in the Pulitzer Trophy Race, established a new speed record for land planes over a closed circuit by averaging 248.976 miles per hour. Two weeks later, Lieut. Doolittle, winner of the Schneider Trophy Race at Baltimore, Md., with the same airplane which was utilized by Lieut. Bettis in the Pulitzer Trophy Race, saved the substitution of pontoons for the landing wheels, established a new speed record for seaplanes by averaging 232.575 miles per hour.

Captain Westside T. Larsen, Air Corps, was awarded the Trophy for 1933 in recognition of his pioneering flights in connection with the development of methods of procedure of Aerial Frontier Defense. These flights involved instrument take-offs and landings on both land and water, proceeding to designated points at sea and returning therefrom under instrument flying conditions. Through Captain Larsen's untiring zeal, various obstacles incident to flights of this nature were surmounted and the way was paved for the training of other Air Corps officers in the technique of this highly important art.

General Arnold becomes a "repeater" among the worthy company of holders of the V-6739, A.C.

Mackay Trophy award who are still actively connected with the Army Air Corps, sharing this distinction with Captains Oakley G. Kelly and Lowell H. Smith.

It will be noted from the foregoing

that former Lieut. John A. Macready (now Major, Air Reserve) won the Trophy for three consecutive years, and that former Lieut. Eric H. Nelson (now Major, Specialist Reserve) won it on two occasions.

---600---

TEMPORARY PROMOTION IN THE AIR CORPS

The recent action of the War Department in putting into effect a policy of according temporary promotion to Air Corps officers is the culmination of a number of recommendations from various sources. To review briefly these recommendations:

The Morrow Board recommended as follows: "To provide rank commensurate with command during the present shortage of field officers in the Air Corps (Air Service), we recommend that Congress be asked to provide that the assignment by the Secretary of War of Air Corps officers to flying commands, such as wings, groups, squadrons, and schools, and not to exceed 12 important air stations, shall, when the Chief of the Air Corps certifies that no officers of permanent suitable rank are available for such assignment, carry with it the temporary rank appropriate to such command, for the period of such assignment."

The Air Corps Act of 1926 embodied this recommendation in substantially the same language, but added that the temporary rank would be limited to two grades above the permanent rank.

The War Department Special Committee (Baker Board) on Army Air Corps recommended that a system of selection and retirement similar to that in effect in the Navy and Marine Corps be provided for the whole Army, and then recommended further as follows:

"Pending the time when action under the previous suggestion results within the Air Corps in rank commensurate with responsibility, place in force the provisions of the Air Corps Act of 1926, providing for temporary advance in rank."

This recommendation was concurred in by the Federal Aviation Commission, which recommended as follows:

"There should be immediate and positive action to improve the promotion situation in the Army, with special reference to the Air Corps. The authority to provide temporary rank in the Air Corps, to make the rank commensurate with the responsibilities held, should be broadened and then used."

The War Department has issued War Department Circular No. 7, dated January 25, 1935, to make these recommendations effective, and to announce an initial list of the various positions which are to carry advanced rank. Further consi-

deration will be given to the provisions of Circular 7 of the War Department with a view to expanding the initial list of positions involving temporary grade to keep pace with the expansion of authorized programs of personnel and equipment. Thus there will be in the future a larger opportunity to accord temporary grade commensurate with the responsibilities discharged.

Since the purpose of this advanced rank is to accord to an officer discharging important duties the rank commensurate with his responsibilities, the temporary grade pertains to the position, and will therefore be given to the officer holding such position, to be retained by him during the period that he continues in the position.

In order to be eligible for a given position, an officer must possess the flying, technical, and other qualifications needed to discharge the duties of that position. It will continue to be necessary to have officers qualify themselves in Air Corps technical supply, maintenance, and administrative duties, as well as in the duties pertaining to tactical units. It will also be necessary to have qualified officers for duty on the General Staff, in the Office of the Chief of the Air Corps, as instructors and students in the general and special service schools, and in other positions for which the law does not provide temporary promotion.

Considerations of providing the broadest possible training for each officer, and securing equality of opportunity for all, will require the rotation of qualified officers in these positions and those carrying advanced rank.

War Department Circular No. 6 prescribes the method of classifying officers with respect to technical and other qualifications needed to discharge the duties involving temporary promotion.

The Chief of Air Corps is charged, under the Air Corps Act and War Department Circular No. 7, with the responsibility of certifying the officers for these positions involving advanced rank. In so doing he will, under War Department policies, give due weight to the importance of securing an exchange of officers between the GHQ Air Force and the other duties of Air Corps officers, in order that there may be obtained by this means a mutual understanding of

each other's problems and a furtherance of the best interests of the Service as a whole.

---oOo---

AIR CORPS OFFICERS RECEIVE TEMPORARY PROMOTIONS

Special Orders of the War Department thus far issued announced the temporary promotion of 35 Air Corps officers assigned to various duties at the Materiel Division at Wright Field, O.; the four Air Depots, the Air Corps Engineering School, and with various units of the G.H.Q. Air Force at Barksdale, Hamilton, Langley, March and Selfridge Fields.

These promotions became effective March 2, 1935, and the officers affected will retain their advanced rank for the period of their respective assignments. The Chief of the Air Corps has certified that no officers of suitable permanent rank are available for the duties assumed by the officers promoted.

Eight officers on duty as chiefs of branches at the Materiel Division were advanced to the rank of Major, viz: Captains James G. Taylor, Aircraft; James A. Woodruff, Armament; Edward M. Powers, Power Plant, and David G. Lingle, Repair, all in the Engineering Section; Kenneth B. Wolfe, Inspection Branch, Procurement Section; Bennett E. Meyers, Administrative Branch, Field Service Section; Frank D. Hackett, Miscellaneous Supply and Maintenance Branch, Field Service Section, and Victor H. Strahm, Chief of Flying Branch, Administrative Section.

Captain Romeyn B. Hough, Jr., Chief of the Industrial War Plans Section, was advanced to the rank of Lieut.-Colonel.

At the Middletown, Pa. Air Depot, Major Lawrence S. Churchill, Depot Commander, was advanced to the rank of Colonel; and to the rank of Major, 1st Lieut. Robert W.C. Wimsatt, Executive Officer; Captain Albert E. Simonin, Engineering Officer, and Captain Charles W. Steinmetz, Supply Officer. First Lieut. John A. Austin, Chief Inspector, was advanced to Captain.

Four officers at the Fairfield, Ohio, Air Depot were advanced in rank, the Depot Commander, Major Fred H. Coleman, to Colonel, and the other three to Major, viz: Captains Burton F. Lewis, Executive Officer; Harrison W. Flickinger, Engineering Officer, and James F. Doherty, Supply Officer.

At the San Antonio Air Depot, Duncan Field, Texas, three Captains were advanced to the rank of Major, viz: Morris Berman, Executive Officer; Ralph B. Walker, Engineering Officer, and Robert V. Ignico, Supply Officer.

Three Captains at the Rockwell Air Depot, Calif., were advanced to Major, viz: Charles G. Brenneman, Executive Officer; Courtlandt S. Johnson, Engineering Officer, and Stephen J. Idzorek, Supply Officer.

Captain Frederick M. Hopkins, Jr., on duty as Assistant Commandant, Air Corps Engineering School, Wright Field, was advanced to Major.

Officers on duty with the 3rd Wing advanced to the rank of Lieut.-Colonel were Majors George E. Lovell, Jr., Executive and Operations Officer; Earl L. Naiden, 3rd Attack Group Commander, and Millard F. Harmon, 20th Pursuit Group Commander. Captain John P. Temple, Supply Officer, 3rd Wing, was advanced to Major.

Major Ralph Royce, Commander of the 1st Pursuit Group, Selfridge Field, was advanced to Lieut.-Colonel.

The rank of Lieut.-Colonel also was given to Majors Adlai H. Gilleson, Commander of the 8th Pursuit Group, Willis Hale, Commander of the 2nd Bombardment Group, both at Langley Field, Va.; and to Clarence L. Tinker, Commander of the 7th Bombardment Group at Hamilton Field, Calif.

Captains Walter H. Reid, Supply Officer, 2nd Wing, Langley Field, and Ray A. Dunn, Supply Officer, 1st Wing, March Field, Calif., were advanced to Major.

---oOo---

MAJ. DUNCAN ASSUMES COMMAND OF LUKE FIELD

Army airmen in the Hawaiian Department extended a warm welcome to Major Asa K. Duncan, Air Corps, the new commanding officer of Luke Field.

As the Transport REPUBLIC approached the entrance of Honolulu harbor, a formation of Bombardment and Observation airplanes circled the vessel to honor him as well as five other officers of the Air Corps assigned to duty in the Islands, namely, 1st Lieut. William G. Bowyer, 2nd Lieuts. John K. Gerhart, William L. Travis, Milton F. Summerfelt and Franklin S. Henley. For the three last named officers this was their first duty assignment as members of the Air Corps. They graduated from the U.S. Military Academy in June, 1933, and from the Advanced Flying School, Kelly Field, in June of the following year.

In taking over the command of Luke Field, Major Duncan relieved Captain Wolcott F. Hayes, who held the command for several months following the departure of Major Vincent B. Dixon for duty in the Office of the Chief of the Air Corps as Assistant Executive, the position held by Major Duncan prior to his departure for foreign service. Major Duncan held several assignments during his tour of duty in Washington, and the personnel in the O.C.A.C. extend to him best wishes in his new assignment.

LIST OF MASTER SERGEANTS, AIR CORPS

January 31, 1935

Arranged According to Dates of Rank

1. Dolan, John	Mitchel Field	69. Maricle, Clarence M.	Panama
2. Stevenson, Calvin T.	Randolph Field	70. Mansfield, William J.	Post Field
3. Murphy, Christopher	Hawaii	71. Nelson, Otto H.	Scott Field
4. Cote, Ernest	Kelly Field	72. Leiby, Charles C.	Langley Field
5. Tittel, Horst W.	Mitchel Field	73. Brown, Ernest	Hawaii
6. Linard, Albert Y.	Ft. Leavenworth	74. Kelly, Thomas J.	Hamilton Field
7. Hamlin, Clyde B.	Barksdale Field	75. Carducci, Fred V.	Mitchel Field
8. Randle, Thomas P.	Hamilton Field	76. Ryan, William J.	Kelly Field
9. Ruef, Arnold	Fort Riley	77. Lunday, Samuel	Fort Bragg
10. Costello, Joseph	Brooks Field	78. Brown, Olin	Scott Field
11. Kellems, George W.	Randolph Field	79. Rhodes, Wilbur R.	Barksdale Field
12. Bertram, Herbert J.	Scott Field	80. Grumble, John T.	Panama
13. Hale, Carl T.	Hawaii	81. Wadsworth, Frank O.	Selfridge Field
14. Rickliff, Harry J.	Brooks Field	82. Marquart, Walter R.	Selfridge Field
15. Brandner, Jacob J.	Selfridge Field	83. Sparks, George L.	Philippines
16. Bernhardt, Alfred	Crissy Field	84. Levy, Herman	Randolph Field
17. Wajdowicz, Kazimerz	Rockwell Field	85. Wallace, Bernard	Randolph Field
18. Strosnider, Clyde M.	Hawaii	86. Cooper, Earl L.	Randolph Field
19. Samarin, David	Wright Field	87. Williams, John K.	Kelly Field
20. Gosnear, Henry K.	Selfridge Field	88. O'Briant, Conrad L.	Kelly Field
21. Pulliam, William B.	Randolph Field	89. Pirisky, Joseph	Langley Field
22. Busch, Hans E.	March Field	90. Budhoff, Charles	Langley Field
23. Carmean, Harry P.	Randolph Field	91. Haynes, Clarence	Panama
24. Kilheffer, Cecil L.	Hamilton Field	92. Leitch, DeWitt T.	Barksdale Field
25. English, Joseph E.	Panama	93. Travis, Robert B.	Panama
26. Biesiot, Peter	Kelly Field	94. Arnold, William	Hawaii
27. Beck, Harry	Mitchel Field	95. Haney, Floyd P.	Langley Field
28. Donohoe, Michael J.	Fort Crockett	96. Granger, Albert	Fort Crockett
29. Miller, George	Crissy Field	97. Hughes, William C.	Scott Field
30. Fitch, William F.	Panama	98. Hindergan, Joseph	Hawaii
31. Johannsen, Walter	Kelly Field	99. Klutz, William L.	Kelly Field
32. Bennett, William J.	Scott Field	100. Nendell, Ezra F.	Randolph Field
33. Rector, Otto M.	Hawaii	101. Mills, Burch M.	Kelly Field
34. Dean, Charles H.	Maxwell Field	102. Folz, William H.	Mitchel Field
35. Turner, Harry E.	Kelly Field	103. Hewitt, Harvey H.	Hawaii
36. Richards, Thomas E.	Mitchel Field	104. Bredvad, Kristjan	Brooks Field
37. Chapman, Harry A.	Hawaii	105. Tritiofson, Carl A.	Fort Crockett
38. Holtzman, Albert H.	Fort Crockett	106. Dehlgren, Carl B.	Brooks Field
39. Blakey, Walter M.	Brooks Field	107. Cates, Joe M.	Mitchel Field
40. Hawloy, Victor C.	Langley Field	108. Dawkins, Paul H.	Post Field
41. Jones, Robert P.	Kelly Field	109. Doirant, Henry A.	Hamilton Field
42. Bishop, Joseph H.	Scott Field	110. Stout, George	Langley Field
43. Wiseman, Ruben E.	Fort Crockett	111. Wilson, William A.	Rockwell Field
44. Gamble, Albert G.	Fort Bragg	112. Bills, Harry F.	Kelly Field
45. Davidsen, George E.	Barksdale Field	113. Korr, Robert H.	Langley Field
46. Starling, Walter L.	Mitchel Field	114. Rose, Harry	Langley Field
47. Billker, Frank G.	Mitchel Field	115. Goff, Grover C.	Philippines
48. Costello, Elmer G.	Hawaii	116. Smith, John T.	Randolph Field
49. Murphy, David T.	Scott Field	117. Nero, Ulysses S.	Langley Field
50. Sorenson, Sigurd L.	Randolph Field	118. Waugh, John L.	Barksdale Field
51. Adams, Wilbur	Panama	119. Redfern, William R.	March Field
52. Fagg, Homer J.	Philippines	120. Crowder, Hawkins	Chanute Field
53. Mehogan, James D.	Brooks Field	121. Biando, Joseph	Hawaii
54. Bottriell, Ralph H.	Kelly Field	122. Lucy, Willard D.	Panama
55. Tate, Hugh A.	Maxwell Field	123. Ertwine, Boyd R.	March Field
56. Wiese, William E.	Hawaii	124. Anders, Joseph	Fort Crockett
57. Boecher, Milo	Fort Crockett	125. Fitzpatrick, John J.	Randolph Field
58. Shink, Stewart C.	Philippines	126. Gravlin, Charles F.	Hamilton Field
59. Bradbury, Carl W.	Fort Crockett	127. Wilson, Harry	Philippines
60. Taylor, Clyde M.	Langley Field	128. Petersen, Christian	Hamilton Field
61. Kashe, Harry R.	Langley Field	129. Davis, Samuel J.	Barksdale Field
62. Maylon, Charles	Bolling Field	130. Anderson, George	Randolph Field
63. Loupos, Nico G.	Scott Field	131. Turner, Arthur H.	Barksdale Field
64. Grant, Joe	Randolph Field	132. Crawley, James H.	Selfridge Field
65. Matos, Andrew	Bolling Field	133. Flynn, Louis B.	Brooks Field
66. Rumpel, Ralph J.	Panama	134. Cleverley, George J.	Kelly Field
67. Frazer, John W.	Kelly Field	135. Nelmar, John H.	Panama
68. Putnam, Marion G.	March Field	136. McKibbin, Martin H.	Kelly Field

137. Baxter, Wilford L.	Selfridge Field	175. Haddow, Robert F.	Hawaii
138. Reynolds, Monroe	Randolph Field	176. Berg, Walter B.	Chanute Field
139. McComas, Thomas R.	Chanute Field	177. May, Andrew	Rockwell Field
140. Stutts, Johnie W.	Randolph Field	178. Hayes, Hal F.	Bolling Field
141. Wilkes, Henry G.	Barksdale Field	179. Chowanice, John	March Field
142. Butcher, John W.	Langley Field	180. Gilbert, Grover B.	Chanute Field
143. Wells, Leslie L.	Hamilton Field	181. Klosowski, Alexander	Maxwell Field
144. Lesperance, Alex	Philippines	182. Short, Ronald E.	Langley Field
145. Garner, Gervais J.	Kelly Field	183. Kolb, Julius A.	Panama
146. Taylor, Archie L.	Kelly Field	184. Lee, James A.	Aberdeen
147. Spoor, William W.	Panama	185. Richards, Thomas W.	Rockwell Field
148. Johnson, Chester H.	Langley Field	186. Morrill, Murton K.	Philippines
149. Dalton, Cody	Scott Field	187. Tassock, John	Chanute Field
150. Susemihl, Magnus F.	Brooks Field	188. LaChance, Frank	Langley Field
151. Sweeney, Donald E.	Kelly Field	189. Duffin, Eugene H.	Maxwell Field
152. Berthume, Maurice	Maxwell Field	190. Hohorst, William F.	Panama
153. Parker, Paul W.	March Field	191. Osburn, Charley J.	Kelly Field
154. Brockaway, William B.	Hawaii	192. Horn, Xura L.	March Field
155. Colby, Chester F.	Chanute Field	193. Gule, Cecil S.	Patterson Field
156. Cox, Fletcher J.	Philippines	194. Stockwell, Raymond	Fort Lewis
157. Miller, Arvin E.	Langley Field	195. Young, Oscar	Chanute Field
158. Roth, Benjamin	Mitchel Field	196. Maloney, Frank B.	Fort Crockett
159. Merson, Vernon H.	Philippines	197. McAlko, Stephen	March Field
160. Vessey, William E.	Panama	198. Taylor, George O.	Brooks Field
161. La Londe, Emile E.	Bolling Field	199. Baird, Clarence	Langley Field
162. Woodward, Edwin B.	Randolph Field	200. Church, William R.	Kelly Field
163. Killgore, Alvan	Philippines	201. Wechsler, Henry	Mitchel Field
164. Klingler, George P.	Selfridge Field	202. Hixson, William A.	Langley Field
165. Hukill, Leo	Bolling Field	203. Kraft, George W.	Mitchel Field
166. Montes, Luis H.	Kelly Field	204. Caywood, John	Scott Field
167. Shanley, Arthur J.	Randolph Field	205. Shakespeare, Thomas	Hawaii
168. Simmons, Robert J.	Kelly Field	206. Fraley, Daniel W.	Chanute Field
169. McGaha, Robert C.	Selfridge Field	207. Feyk, Charles	Mitchel Field
170. Rich, William J.	Chanute Field	208. Mendel, George	Maxwell Field
171. Smith, Carlton P.	Brooks Field	209. Landrock, Joseph F.	Selfridge Field
172. Stanaland, George P.	Philippines	210. Carter, James E.	March Field
173. Lessels, James H.	Hawaii	211. Brentley, Carl H.	Langley Field
174. McAleer, Edward	Langley Field	212. Hamer, Mike	Randolph Field

---oOo---

INSTRUMENT FLYING TRAINERS

Reports from various activities indicate that the instrument flying Link type Trainers, which were procured for the training of Air Corps personnel in the use of blind flying instruments, have proved very satisfactory and reduce the amount of training in the blind flying airplane approximately two hours.

Regular periods of training on this device are being required at the activities where they are now located. The Office, Chief of Air Corps, recently issued instructions that additional trainers be procured as soon as funds become available. These will be allocated to Air Corps stations, as follows: seven to the Air Corps Training Center, three to Maxwell Field, two each to Barksdale and Bolling Fields, and one each to Clark, Nichols, Luke, Wheeler, Albrook, France, Hamilton, Crissy, Wright, Selfridge, Scott, and Bolling Fields, Fort Leavenworth and the Office of the Chief of the Air Corps.

---oOo---

STORAGE OF GASOLINE AT NATIONAL GUARD CENTERS

Through the cooperation of the National Guard authorities, the Materiel Division of the Air Corps has made arrangements for the storage of the Regular Army supply of fighting

grade aviation gasoline at the National Guard activities indicated below:

Alabama National Guard, Roberts Field
Ark. National Guard, Arkansas N.G. Airport
Colorado National Guard, Lowry Field
Indiana National Guard, Stout Field
Ohio National Guard, Cleveland Airport
Tennessee National Guard, Sky Harbor Airport
The Regular Army supply of aviation gasoline at the above stations is on the property account of the Air Corps Instructor, and issues are made in the same manner as at a Regular Army station. The availability of these supplies eliminates the necessity for reimbursement to the National Guard organization when Regular Army aircraft are serviced at the airports concerned. It is the desire of the Materiel Division to make similar arrangements at other National Guard activities when the volume of traffic warrants such action and the necessary storage equipment is available.

The National Guard activities indicated in the foregoing also receive fighting grade aviation gasoline on Materiel Division quarterly contracts. The Materiel Division also furnished the fighting grade aviation gasoline for the Illinois National Guard, Chicago Municipal Airport; the Michigan National Guard, Wayne County Airport, and the Washington National Guard, Felts Field, Spokane. When

Regular Army aircraft are serviced at these airports, reimbursement for the supplies is made in the usual manner as for other National

Guard activities not participating in the Material Division contracts.

---oOo---

THE NEW WHEELER FIELD

In his first contribution, the Correspondent from Wheeler Field, T.H., in welcoming the return of the News Letter, remarks that it seems an appropriate time to inform the Air Corps regarding that station. He goes on to say: "While we hope it may not be long until a 'Cross Country' from the mainland to Wheeler Field will be a routine training flight, we appreciate the fact that the two thousand two hundred miles of Pacific Ocean, separating us from the mainland, will prevent the bulk of the Air Corps from visiting Wheeler Field for the present.

The present Wheeler Field has been completed and in use only since May, 1933. The old Wheeler Field lies immediately adjacent to the present field. All buildings on the old field, except two old hangars used for storage, have been dismantled. The landing surface of the old field is in good condition and is used by all aviation units on Oahu as an outlying training field.

The new Wheeler Field is a modern flying field in every respect. The landing surface lies a mile and a quarter in the direction of the prevailing wind and averages nearly a half mile wide. The surface is red volcanic ash, eighty percent covered with a new growth of Bermuda grass. There are no hard surface runways at present.

Wheeler Field is the largest landing field in the Hawaiian Islands and the only field large enough for the take-off of large transport type airplanes with maximum load. The plan for the field contemplates that the old and new landing surfaces shall be joined to form one huge field.

Wheeler Field is the station of the 18th Pursuit Group, which is composed of the 6th and 19th Pursuit Squadrons and the 75th Service Squadron. The 11th Photo Section and 26th Attack Squadron are stationed at Wheeler Field and are attached to the 18th Pursuit Group.

The Pursuit Squadrons are equipped with P-12B, C, and E type airplanes. The Service Squadron operates QA-3 and O-19B type aircraft, and the Attack Squadron, A-3 type airplanes. The Photo Section employs an O-19C for photographic work. The number of assigned aircraft is adequate for effective flying training, but the type of Attack aircraft is obsolete.

The 18th Pursuit Group is manned by an average of 60 officers and 550 enlisted men. The bulk of the officer personnel is quartered in the five sets of field officers' quarters and the 37 sets of company officers' quarters on

the post. A few officers of other branches are quartered at Wheeler Field and a small number of Air Corps officers (usually not to exceed ten) are on commutation status. It is seldom necessary for an Air Corps officer to be on commutation status for more than three months. Quarters off the post, while not expensive, are generally scarce and not entirely satisfactory.

The quarters on the post, both for officers and noncommissioned officers, are one story, flat roof, concrete block structures faced on the outside with colored stucco. They are new, very attractive, quite comfortable, and consist of - a large lanai (porch), living room, dining room, kitchen, 3 or 4 bedrooms, servants' quarters, and a patio.

The noncommissioned officers' quarters are generally similar to the officers' quarters, but somewhat smaller.

The organizations are quartered in four permanent 3-story barracks constructed of concrete block faced with stucco.

The aircraft of each squadron are housed in a new permanent double hangar.

Group Headquarters and all facilities are housed in permanent buildings.

A combined officers' club, mess and bachelor officers' quarters is one of the most attractive buildings on the post. Accommodations are usually available for all bachelor officers assigned to Wheeler Field. The noncommissioned officers also have a very excellent club building.

Wheeler Field is not a separate post as are most Air Corps stations in the States. It is a part of the post of Schofield Barracks which is the home of the Hawaiian Division. The 18th Pursuit Group comes under the control of the 18th Composite Wing for tactical training; under the Hawaiian Air Depot for Air Corps Supply, and under the Hawaiian Division for administration, discipline and supply other than Air Corps.

Operating as a part of the large Post of Schofield Barracks has certain definite advantages from a social, recreational, economical and professional standpoint. A splendid feeling exists between the Air Corps and the personnel of Schofield Barracks. It is believed that the recreational facilities of Schofield are the best in the Army, and that athletics are nowhere so well organized or conducted on such a large scale. The 18th Pursuit Group successfully participates with the units of the Hawaiian Division.

Wheeler Field is located 21 miles northwest of Honolulu on a good, hard surface road. It is approximately in the center of the island of Oahu on a huge plateau about 800 feet above sea level. It is cooler than Luke Field, which is located

on Ford Island in Pearl Harbor. Wheeler Field receives considerable rain during the rainy season, but weather seldom

interferes with flying operations. It is never hot and what is more important at this season - it is never cold.

---oOo---

DETAIL OF A.C. OFFICERS TO WAR COLLEGE

According to a recent announcement of the War Department, the following-named Air Corps officers have been selected for detail as students at the Army War College, Washington, D.C., for the 1935-1936 course:

Lieut.-Colonel	George H. Brett
Lieut.-Colonel	John F. Curry
Lieut.-Colonel	Barton K. Yount
Major	Robert C. Candee
Major	Walter G. Kilner
Major	Douglas B. Netherwood
Major	Laurence F. Stone
Captain	Francis M. Brady
Captain	Lester T. Miller

Orders effecting these details will issue at an early date, and as soon as the provisions of the War Department Appropriation Bill for the next fiscal year are known.

The orders will direct the officers selected to proceed to Fort Humphreys, Washington, D.C., in time to report to the Commandant of the Army War College between August 15 and 20, 1935.

Ed. Note: Under Par. I, General Orders, No. 1, War Department, February 14, 1935, the military post and reservation designated as Fort Humphreys, Va., will hereafter be designated as Fort Belvoir, Va. Under Par. II of the above order, the military reservation designated as The Army War College, Washington, D.C., will hereafter be designated as Fort Humphreys, D.C.

---oOo---

CAPTAIN LARSEN LECTURES ON INSTRUMENT FLYING

Interest in military aviation in Spokane, Wash., swelled on a new tide recently when Captain Westside T. Larsen of Rockwell Field, Calif., arrived in a Martin Bomber to lecture officers of the 41st Division Aviation, Washington National Guard, on instrument flying.

Captain Larsen flew north via Salt Lake City and returned via Wenatchee, Wash. Announcement of his coming, with the big Bomber attracted a large crowd to the airport to inspect the airplane, the second of its kind to visit Spokane.

The pleasant and willing manner in which Captain Larsen explained the many

details of the airplane increased in Spokane the many friends of the Air Corps.

To the officers of the National Guard Aviation, Captain Larsen presented several new and interesting sidelights on instrument flying, illustrating his lecture with specially prepared charts and pictures. He spoke of the instrument flying courses being conducted at Rockwell Field and praised the officers attending the Air Navigation School for the speed with which they are mastering the subject.

Of particular interest was the drift indicator on the Bomber and the manner it is used with the compass in maintaining a definite course.

---oOo---

NIGHT FLYING OPERATIONS BY WASHINGTON NATIONAL GUARD AIRMEN

Greater night flying operations are scheduled for pilots of the Washington National Guard as a result of the completion in Washington of the Northern Transcontinental Airway from the Twin Cities to Seattle. Felts Field is now

the division point for two lighted airways one leading to Pasco and Pendleton and the other to Seattle, via Ellensburg. East of Spokane the Northern Transcontinental Airway goes to Missoula, Montana, and Butte, Montana.

REPORT OF FEDERAL AVIATION COMMISSION (Continued)

The Commission recommends that every effort should be made to secure the enrollment of personnel of air line organizations in the Reserve forces of the Army or the Navy. The belief is expressed that the personnel organizations of the domestic air transport lines should be left largely undisturbed in the event of war, the need for transport pilots being greater on the routes to which they have been trained than in any military service in which they might be inducted. In anticipation of the degree to which military effort would engross the energies of the country, however, it is thought desirable that even those who were sure to be needed in their present transport positions should be enrolled in the Reserve. The War or Navy Department would then be in a position to keep track of them, and to make its own listings of the special duties for which they are qualified, in case it should be desirable in war to release personnel from certain lines for military service, or to transfer them from some lines to others of greater military importance.

The suggestion that enterprises receiving so much direct governmental aid as much be given to the air lines should be under full governmental control to the extent of requiring the enrollment of all their personnel in a Reserve was given careful consideration and rejected. To apply compulsion would, it is feared, endanger bringing the air lines too much under military influence. In any case it is believed that enrollment on a voluntary basis can be so nearly complete that the numerical gains by compulsion would be almost negligible. It is estimated that about three-quarters of the pilots now employed in air transport hold Reserve commissions. If special provision is made for them, and especially if the plan proposed for aviation insurance in the Reserve can be put into effect, the percentage of enrollment can no doubt be materially raised.

Extending the general doctrine of finding an appropriate place in the Reserve for all those who have specialized aeronautical talents, it is felt that some record should be made of the capacity and the availability of the 10,000 or more American civil pilots not employed in air transport. While some of them are over age for any military service, some physically unfit and some possessing so little experience as to start virtually from scratch on any military aviation training that might be given them, still it seems there must be within this body of piloting personnel a substantial amount of ability that would be of direct and immediate use in war. There should be further study of

means of securing its classification and enrollment, of course on a purely voluntary basis.

Much thought was given to the possibility of using a special class of Reserve as a means of lending some financial encouragement to private flying. Hostility was already expressed to direct subsidy to private pilotage or ownership, but it was felt that there might be much in favor of payment of a modest sum each year to those private pilots who demonstrate a certain minimum of competence and who keep up their practice and check in periodically with a military organization. Working over the details of such a plan, complications have appeared so great that any definite recommendation has been withheld. It is urged that something of the sort, or some equivalent means of accomplishing the same results, be kept under continuous study.

There is special advantage in giving attention to this matter now in that it anticipates an inevitable war-time problem. Aside from classifying the personnel, it has appeared that it would be well to prepare for one of the difficulties of war-time expansion by providing special short training courses, designed to supplement the present knowledge of civil pilots by giving them in a few months' time the specifically military training necessary to make them available for prompt mobilization in an emergency. In the event of war, any air force will have to solve the problem of taking into service a great number of prospective pilots with every imaginable degree of aeronautical experience, and of so classifying them as to make the best use of whatever previous training they may have had in abbreviating the period of their preparation for active service. Suggestion is made that courses be now developed to take men who have already shown that they know how to fly, and who display the necessary officer-like qualities, and to give them in the shortest possible period of time the particular things that they lack to make them into military or naval aviators qualified for immediate war service.

While this proposal for specialized training courses has obvious administrative complications, the Commission feels it to conform so nearly to one of the special problems of war, and to promise so valuable an experience and to be so useful in increasing Reserve personnel, that it earnestly commends it to the study of the War and Navy Departments.

Asserting that for everyone engaged in aviation the problem of insurance is an ever present worry and pointing to the extra heavy premiums charged when any profession connected with aviation is involved, the Commission, while taking into consideration the fact that the

standard government insurance is now available in amounts not exceeding \$10,000 to Reserve officers if they apply for it at a training school or on extended active duty, believes that the government should make some special provision for those who have qualified for military flying and enrolled in the Reserve, in order that they may fly as much as they desire and under any conditions that seem to them proper without considering the effect on their insurance policies.

The suggestion is made that government insurance, covering the aviation risk exclusively, be made available in amounts substantially beyond the present limitation, so making it possible for the officers to carry commercial life policies excluding the aviation hazard and to avoid any special abnormal increase in their premiums. We are recommending that in creating such insurance it very frankly be kept off an actuarial basis, with premiums arbitrarily set at a moderate level not fully covering the statistically indicated hazard but high enough to insure that only the amount really needed will be taken.

This proposal is made especially with reference to Reserve officers. The Commission foresees that there will be immediate protest that this is a discrimination against the regular service. Any corresponding recommendation there is omitted because insurance for the Regulars seem to be necessarily intertwined with the whole question of flying pay, now undergoing renewed study by an interdepartmental committee. The Regular aviator now receives recognition of his increased hazard in a 50 percent increase in his base pay, supposedly designed to provide, among other things, for the payment of surcharges on insurance premiums. The Reservist may have quite as high a surcharge to meet on an ordinary commercial premium, yet his total of active duty during the year is so small that his flying pay in most cases amounts to no more than a couple of hundred dollars. His is the case that seems particularly urgent from the insurance point of view, and suggestion is made that his case be given special attention as an additional inducement for the best aviation personnel to enter and remain in the Reserve.

Quite aside from any protection that may be furnished by insurance, it seems clear that members of all arms should receive equal treatment in the event of actual injury or death. Under the present law and regulations, Reserve officers on protracted active duty with the Army or Navy are given substantially the same treatment and privileges as Regular officers, including the privilege of hospitalization in case of injury and of compensation for dependents in case of accidental death. Reservists

on inactive duty, performing their flight practice from time to time through the year, receive on the other hand only limited hospitalization if injured, no retirement privileges, and no death benefit except a small contribution to funeral expenses. Officers of the National Guard, when practicing on government-owned airplanes outside their regular squadron drill periods, are reported to get even less protection.

Before aviation became a factor in military operations this discrimination may have seemed a minor matter, as the training of the Reserve in the other arms was not such as to make injury or death at all likely. With the coming of aviation the situation has undergone radical change, for the hazards of military flying are ever present and are quite as acute for a Reservist as for a Regular. It is accordingly recommended that the two groups be brought to a parity of treatment.

Convinced that aeronautical progress, in future as in the past, will be in direct proportion to the engineering ability and sound judgment of the technical personnel charged with its development, and which is particularly true in the military Services, such administrative and legislative steps as necessary should be taken to provide each Service with an adequate staff of professional specialists.

The development of personnel for the special responsibilities of aeronautical design, construction and procurement has never been placed upon a clearly established basis. There is at present no system for recruiting and training officers to carry on this important work. Aeronautics has passed through its pioneering stage and has fully earned a permanent status in the Army and Navy. The necessary group of aeronautical engineers needs also to be placed upon a permanent basis. A decision has indeed to be taken on whether primary dependence is to be placed on officers or civilian employees for technical work. The Navy has heretofore relied almost entirely on officers, while the Army has made a much larger use of civil-service personnel.

The past record of the Naval Bureau of Aeronautics in the handling of engineering development and procurement matters appears to leave little to be desired. This Bureau has had the continued services, in a responsible capacity, of officers of the Corps of Naval Constructors trained and experienced in industrial problems. There has been recently, however, a tendency to depart from former methods and to evolve a new plan by which an indefinite number of line officers are to be given basic training in aeronautical engineering. If this plan be placed in operation in such a way that the group of officers so trained can be continuously employed upon the work of

their specialty, with opportunities of advancement in rank equal to those of their line contemporaries, then the procedure still lacks the essential requirements of a professional status. We cannot conceive that a proper esprit de corps can be developed on such a basis. It cannot be conducive to efficiency or professional morale for the members of a professional group to be carried as extra members of an executive branch with an implication of restricted qualifications. The tendency would be for the more able officers to avoid specialization under such circumstances.

The balance of advantage would seem to dictate that aeronautical engineers should be commissioned in a staff corps, either a new one or the present construction corps, whose head should be responsible for the progress of its members in professional ability and experience.

There should be legislative authorization for a definite number of aeronautical engineers in each rank, sufficient to perform the peace-time work of the Navy with a reasonable surplus for the immediate requirements of war. To determine numbers, account should be taken of Reserve personnel available to be recruited from among the professional aeronautical engineers in civil life.

Officers to be designated as aeronautical engineers should be selected annually from recent Naval Academy graduates of special aptitude and should be given the opportunity to acquire practical experience in all phases of aeronautical work, including sufficient flight training for their specialty.

The Army Air Corps situation as regards aeronautical engineers also needs attention. Selected officers have been given special education and detailed to professional duty while others, after professional education, have been assigned to general duty. There appears to be no system, through rotation of tours of duty, to provide broad engineering and industrial experience for officers who must assume important administrative responsibility for procurement. The remarks made as to the desirable method of developing a staff of aeronautical engineers in the Navy apply in general to the solution of the similar problem in the Army Air Corps. A specific plan is not proposed, but recommendation is made that the War Department take stock of the present Air Corps personnel and devise an organization by which necessary specialists can be recruited, developed, and utilized effectively under the guidance of a leader of their own number.

PROCUREMENT OF MILITARY AND NAVAL AERONAUTICAL MATERIEL

The problem of air force materiel appears to divide naturally into three parts. There must be enough modern air-

aircraft in being to carry on peace-time exercises and to be ready for sudden appearance of war. There must be production facilities capable of rapid expansion to meet expanding war-time needs and to make up for the fantastically rapid wastage of equipment under war conditions. There must be a policy of development which will assure that the Service equipment currently in use will never be allowed to fall into a state of serious obsolescence, and that new types of steadily improving quality will always be in course of preparation.

All three points are essential, but the greatest among them is the third. Aircraft production can be stepped up, if threat of war seems to impend, on a few months' notice. Plants normally engaged in other types of work of less military importance can be converted to the building of aircraft in but little longer. But to develop a fundamentally new type of airplane or of engine to the point where it is ready to risk production takes years; not one or two merely, but several. Design and development cannot be extemporized.

If either quality or quantity had to suffer for economic reasons, there should be no hesitation in advising that substantial sacrifices be made under the second heading to maintain the highest possible standard under the first. It is not meant to minimize the importance of price. It must be taken into account, and a wide difference of price may often justify a minor sacrifice in performance. Price determines the number of aircraft that can be bought with a given amount of money currently provided. More than that, it serves also as a rough measure of the man-hours and facilities required for production of the type, and so of the demand that its production would make on the national man-power and industrial plant in war.

Price must, however, be kept as a rule in a secondary position. "We are convinced," says the Commission, "of the soundness of the basic principle that procurement policy should be planned with primary reference to getting for the Services the best equipment that the current state of the art allows, and keeping in constant development new equipment to take advantage of the constantly accruing advances in the art of aircraft design."

The value of an industry manufacturing military aircraft cannot be gauged in terms of its performance in peace alone. If no conditions except those of peace were ever to be encountered, there would be no need for military aircraft and no need for any kind of an industry to build them. The industry functions in peace with primary reference to the possibility that it will be called upon to play a part in war, and the test of fitness for war lies in the ability to expand and accelerate production with enor-

mous rapidity without loss of the organization's efficiency or unreasonable increases of cost.

There are two contending views on the organization of an aircraft industry. Some witnesses presented to the Commission the belief that readiness to expand is best assured by the maintenance of a very large number of individually small units. Others have maintained that larger units, permitting of a more complete framework of industrial organization and less dependent for their functioning on the ability of a single individual to watch over every detail, are more elastic and that a smaller number of larger companies is to be preferred.

The second view seems to accord with the general lessons of experience in industrial management. It seems in general to correspond most closely to the requirements of this particular industry and to the conclusions to which European nations have generally come.

In any case, it would appear necessary to place some limitation on the number of separate manufacturing units kept in military production because of the limited number of separate orders that can at any time be in course of execution. The Army purchases about seven or eight distinct types of aircraft, only five of which are bought in any considerable numbers. The Navy has an extreme production range of about the same order. Even if two sources of supply were kept always in production upon each of the major types, and if no manufacturer were allowed to participate in the development of more than a single type (which would seem a most undesirable restriction) there would be room for only about twenty military manufacturers at the very outside. Allowing for inevitable duplications where one manufacturer attains a leading position in the development of two or three types of aircraft, and for the impossibility of splitting the limited orders given for some types among two manufacturers without serious waste, we conclude that the actual maximum number of permissible units is a dozen or less rather than a score or more. To increase beyond that level would seem to make it inevitable that some of the plants will always be virtually out of work and in a state of collapse, a condition undesirable from any point of view. It has always to be remembered that this industry is peculiar in that it has essentially but a single customer. Compared with government orders, the total of other business to be done at home and abroad is still of minor magnitude. At the present time there are seven independent units actively engaged in military aircraft production in the United States, making it their major and in some instances their sole business. About as many more are in receipt of occasional orders and must

be considered as a part of the military industry, while a number of others are without Army and Navy business but clamoring to receive it.

This matter was gone into at some length because of a curious argument that the adequacy of the nation's military aircraft industry can be gauged by the number of independent units that it contains. It has been asserted that a country with forty manufacturers living from hand to mouth is inherently in a better position than one with half a dozen well organized plants able to turn to any type of work and to carry on and expand their operations without exclusive dependence upon any one individual's supervision. "We do not agree," says the Commission. "While a monopoly and the destruction of competition are of course to be shunned, we believe that a reasonable degree of concentration of manufacturing capacity is desirable for stability and to provide an integrated organization for emergency expansion.

To be continued.

---oOo---

FAST TRAVELING BY 17TH PURSUITERS

An average speed of 223 miles per hour was maintained by the 17th Pursuit Group from March Field while traveling from El Paso, Texas, to Hensley Field, Dallas, Texas. The 17th, consisting of three squadrons equipped with P-26A's and commanded by Captain Ira C. Eaker, were enroute from March Field to Maxwell Field, Ala. A landing was made at Barksdale Field, La., for an overnight stay, but bad weather kept the Group there for two days. The three squadrons were commanded by Captains Morris, Peck and Hine.

---oOo---

CRISSY FIELD OFFICERS HEAR GEN. WESTOVER

While on his inspection tour of Pacific Coast stations, Brigadier-General Oscar Westover, Assistant Chief of the Air Corps, visited Crissy Field, Presidio of San Francisco, Calif., and gave a short talk before the assembled officers of the field, briefly outlining some of the War Department policies applying to the Air Corps in regard to replacement and procurement of airplanes, training requirements and personnel increments. Although his stay was brief, General Westover found time to give attention to some of Crissy Field's problems.

---oOo---

Thirty-nine applicants at Hamilton Field signified their desire to qualify as Regular Army officers at the written examination for appointments as second lieutenants, scheduled to be held on April 2nd, next.

THE COLD WEATHER TEST FLIGHT

The Cold Weather Test Flight operated during the entire month of February in the northern states where snow and ice lasts during all the winter season. Planes making the test comprised an assortment of service type airplanes, 17 in number, viz: 3 each of P-26 and P-12K (Pursuit); 3 B-12 Martin Bombers; 3 O-43A (Observation); 3 A-12 (Attack) and two C-27 Bellanca Transports. The purpose of the Flight was to gain information as to their operating efficiency in regions where King Winter reigns supreme.

The Flight, started from Selfridge Field, Mich., on February 1st, and landed at that field on the last day of that month. In command was Lieut. Col. Ralph Royce, whom one would not be far wrong in characterizing as the premier cold weather pilot in the Air Corps, since back in 1930 he led the First Pursuit Group on an extended flight from Selfridge Field to Spokane, Wash., in the dead of winter, and last August was a member of the Alaskan Flight Expedition.

Altogether, 21 officers and 25 enlisted men participated in this flight. The hardships were many, and those who hail from the Southland no doubt had many occasions to hum the popular tunes reminiscent of Dixieland. Comprising the Group Staff of the Flight, in addition to its leader, were Major Irvin B. March, Medical Corps, Flight Surgeon; Captain Calvin E. Giffin, Adjutant, Operations and Photographic Officer; Captain Fred C. Nelson, Executive and Engineer Officer, Lieut. (JG) James R. Lee, U.S. Navy, Official Observer; Lieut. Daniel C. Doubleday, Radio Officer; and Lieut. Donald F. Stace, Supply Officer. The enlisted personnel of the Group Staff were Master Sergeant Grover B. Gilbert, Photographer; Staff Sergeant Robert C. Carr, Operations and Finance Clerk; Cpl. Robert F. Traxler, Medical Dept., Medical Attendant, and Cpl. John A. Brock, Engineering Clerk.

Piloting the P-26A planes were Lt. Colonel Royce, 1st Lieuts. Earle E. Partridge and Paul M. Jacobs. The pilots of the P-12K's were 1st Lieut. Yantis H. Taylor, 2nd Lieuts. Clark N. Piper and Joe W. Kelly. The Observation pilots were Capt. Giffin, 1st Lts. Isaac W. Ott and Reuben Kyle, Jr.; the Attack pilots, 1st Lieut. Henry M. Bailey, 2nd Lieuts. Harvey P. Huglin and Paul D. Bunker; the Bombardment pilots, Capt. Arthur G. Hamilton, 1st Lieut. Paul H. Kemmer and 2nd Lieut. Birrell Walsh, and the Transport pilots, Capt. Nelson and 1st Lieut. Donald F. Stace.

The enlisted men of the Flight Section were Mr. Sgt. Robert McGaha, Line Chief, Staff Sgts. Mathies Cipelle, Henry Williamson, Karl R. Johnson, Elbert Dossett, Donald Bryan, Cayus P.

Peterson, John Murphy, Thomas B. Vinson, Norman D. Duggar, Robert F. Miltz, Sgts. Robert W. Land, William B. Buckley, Ludwig Kurrley, Roy H. Coulter, George W. Hollowell, Cpls. Raymond J. Koch, Harvid Sager, James S. Pollock, Howard N. Scales and Pvt. Jack Mathews.

The Provisional Winter Test Group got under way shortly after nine o'clock, February 1st, the first ship in the air being the Bellanca transport, with Capt. Nelson at the controls. With him were Maj. March, Lieuts. Doubleday, Lee and Mr. Sgt. Gilbert. In short order, the other 16 airplanes took off. Two hours later, the advance ship landed on a runway at Alpena Airport, Michigan, which had been cleared by snow plows.

The first arrivals following the Bellanca were the three P-26A's. Circling the airport, they proceeded to land. Two of them settled on the runways, but the third, piloted by Lt. Col. Royce, settled in 14 inches of soft snow. He promptly took off again, settled and taxied into position. The O-43A's were next to arrive, all of them landing on the runway. One of them, piloted by Lieut. Kyle, lost a side engine cowl when approximately ten minutes out from Selfridge Field. The cowl had struck the stabilizer and badly dented that member. When the Bombers came in, the onlookers experienced a momentary feeling of anxiety when two of them swerved at high speed toward the steep banks on each side of the runway.

No difficulty was experienced in landing, however. Two of the three A-12's, the next to arrive, landed on the runway, but the third settled in the heavy snow and promptly became stuck. The pilot, Lieut. Bailey, attempted to pull the airplane out, but it was not until several Selfridge Field pilots well versed in the art of snow taxiing came to his assistance that he obtained the necessary experience which served to stand him in good stead later in heavier going. The plane last to arrive was the C-27, piloted by Lieut. Stace, bearing the enlisted staff and a few Pursuit mechanics.

The Alpena Chamber of Commerce served coffee and doughnuts to the flight personnel.

At Alpena the airplanes were serviced from a 300-gallon tank truck with a motor take-off. The gas required chamoising, and it was almost dark before the last airplane was serviced.

Following an informal dinner, two members of the flight, Lts. Kyle and Ott, were driven to the airport and anticipated spending a restful night in the comfort of an "Arctic" sleeping bag. They were awake more than they were asleep, particularly along about 3:00 a.m., when the thermometer was hovering at 20 below and a brisk wind was creeping in through chinks in the bag. The enlisted men

awoke at 6:30, although those who slept in the arctic bags were awake some hours earlier.

The task of starting the engines began at nine o'clock. All were started without difficulty, and two hours later the Bellanca Transport took off down the mile-long runway. Encountering heavy fog over the Straits of Mackinac, Capt. Nelson, after making several attempts to get through, finally decided to land at the largest airport in that part of Michigan, the Sheboygan County Airport, Sheboygan. This was prompted largely by the amount of snow observed in that section of the State and because of the inexperience of most of the pilots in so far as snow flying was concerned. The snow on this airport was approximately 14 inches deep, soft and sticky, and was destined to give the pilots their first real taste of the difficulties of snow flying.

Lt. Doubleday contacted the other elements of the flight and guided them into Sheboygan. Due to the fact that the P-12K element had not provision for radio, because of the lack of generators on the fuel-charger type engines installed in these planes, it passed over the airport at Sheboygan both on the way out and on the way back to Alpena, to which point it was necessary to return when fog was encountered.

The B-12 element was first to arrive at Sheboygan. Lt. Walsh, in landing, struck the fence around the airport with the heel of his skis. When he attempted to taxi into position on the line, the snow piled up in front of the skis, and on opening the throttle to pull through, the B-12, as the News Letter Correspondent puts it, "rested its weary ear on the ground and went to sleep". The only damage to the Bomber were bent propellers and a ruptured fitting on the right ski.

To add to the difficulties in landing on a field none too good at best, a crowd which quickly formed on the arrival of the Transport, was absolutely beyond handling before the last element arrived, overrunning the field and adding to the general confusion.

During the landing and taxiing in the heavy snow, the fuselage on the O-43, piloted by Lt. Kyle, buckled badly and, after a test flight, Col. Royce ordered the pilot and mechanic to proceed to Wright Field for reinforcement of the airplane structure. Lt. Kyle took off at 2:00 p.m., and it was later learned that before he could reach Selfridge Field ceiling and visibility vanished completely and, after milling around for several hours, he breathed easier when he set down the airplane with its five remaining gallons of gas at Selfridge Field.

The A-12 element, accustomed to flying under these 50-foot ceilings, finally sneaked through to St. Ignace, where

the pilots and mechanics enjoyed a lunch prepared for the men of the P-12K element who failed to arrive. Later in the afternoon, the P-12K element once more took off from Alpena and arrived at Newberry. During the process of servicing the P-12K's there, Lieut. Taylor's feet were severely frost-bitten, this causing him much discomfort during the later stages of the flight.

The main portion of the flight departed from Sheboygan on February 3rd, leaving Lieut. Walsh and three mechanics there to await new propellers.

On arrival of the flight at Newberry, the exceptionally strong wind, coupled with the tendency of the P-26 to drop one wing, necessitated practically carrying them in from the field. Only by having one man ride the windward wing and two others pushing on the trailing edges of the wings were they brought into position on the line.

Due to insufficient hotel accommodations in Newberry, seven officers were taken care of by the Michigan State Police in their barracks, the group enlisted staff were quartered with the Michigan Department of Conservation Officers, and the remainder of the flight doubled up to utilize all available accommodations at the local hostelry.

A terrific snow storm on the morning of the fourth, necessitated the suspension of all work. All had checked out of the hotel, and a wild scramble ensued to regain the choice rooms vacated that morning.

During the night the thermometer registered 28° below. It rose three degrees in the morning but no great difficulty was experienced in starting the engines and no one seemed particularly cold or fatigued. The entire day was spent in testing equipment and making test flights on the four feet of snow covering the field. Several starters were broken, due to the electric energizers suddenly exerting too great a pressure on the starter shaft.

The starter shaft in Lieut. Jacob's P-26 was broken, but since the engine started he decided to go through to Laurium, the next scheduled stop, which he reached without difficulty. The C-27, which took off immediately afterward, was forced back after flying two hours when a heavy snow storm was encountered in the vicinity of Marquette.

On the morning of February 6th, all aircraft were started, and attempts were made to break them loose from the snow to which they were frozen fast. Officers and men pushing on the tail and trailing edges of the wings were blown about like leaves from the propeller blasts as the pilots opened throttles wide to secure every ounce of available power.

After hours of work, the first transport moved into the field ("steamed" would probably describe it more accurately, says the Correspondent) and made one

attempt after another to get off the 2600-ft. field. It became necessary to taxi in wide sweeping curves, at full throttle, to obtain sufficient speed to lighten the airplane enough to taxi fast, for no wind was blowing. After numerous unsuccessful attempts, a section of the fence surrounding the airport was removed and, with the additional space provided in the adjoining field, the C-27 finally took to the air.

Lieut. Bailey in his A-12 cleared the fence, but the two other A-12's simply steamed on through the fence into the next field. One of the A-12's was temporarily put out of commission when the pilot attempted a turn at high speed. The right ski dug down into a 5-foot drift and wrenched the ski fittings loose from the ski proper. The other C-27, piloted by Lieut. Stace, more heavily loaded than Capt. Nelson's, failed to get off without the help of a wind and was forced to remain at Newberry for two days until a runway could be plowed.

Conditions at Laurium were even worse than those at Newberry, 147 inches of snow during the winter having alternately thawed and frozen until it had worked down to a depth of six feet, with a top layer of four inches of soft snow. All airplanes experienced difficulty in getting off at Laurium and were finally flown, light, to Portage Lake at Hancock, Mich., where fuel was loaded into them and the crews were taken aboard.

Prior to the movement from Laurium, the flight performed several missions, and it was definitely decided at this stage that the functioning of the larger and heavier craft, such as the C-27's, the B-12's and the A-12's, equipped with wheel skis, was not all that could be desired, due to the wheel acting as a brake and imposing a terrific drag at take-offs and while taxiing.

During a ferry trip on February 7th, Lieut. Doubleday, flying Col. Royce's airplane, was circling with other planes over Portage Lake preparatory to landing, when the P-26 went into a spin at low altitude and crashed on the ice. Fortunately, the pilot suffered only a slight injury, but the airplane and engine were completely demolished.

This accident demonstrated the necessity of having skis and snowshoes for the Flight Surgeon and his assistant, and these were promptly purchased and stowed aboard each transport.

Capt. Hamilton proceeded in his Bomber to Duluth, where he was joined by Lt. Kyle, who had returned from Dayton, where the fuselage of his plane had been reinforced. Lieut. Kyle landed at the airport, and Capt. Hamilton set his Bomber down on the harbor ice. On the following day, Lieut. Kyle experienced considerable difficulty getting out of a 2400-foot field covered

with 31 inches of sticky snow.

The remainder of the Flight in Duluth on the afternoon of February 9th, and the testing of equipment began in earnest. Sunday was utilized in rest and short working periods for those who cared to accomplish the necessary maintenance. The lack of proper police measures to handle the huge crowd assembled on the harbor ice prevented any flying which might possibly have been accomplished that day. Several officers spent the day skiing. One officer in particular, describing his first experience at this sport, stated that it was fine for the first ten feet when he was going slowly, but after he had picked up flying speed in the course of the next 200 feet, someone stuck a grove of trees in front of him, and he had the choice of colliding with them or with the ground. He rolled himself into a knot and thereafter lost all his zest for skiing.

Officers of other branches of the Army stationed at Duluth, consisting of Col. A.K.B. Lyman and Capt. Doswell Gullatt, Corps of Engineers, and Maj. R. Ristine, Infantry, entertained the officers of the Flight during their stay at that city, having previously made all arrangements for the marking of the ice, parking of airplanes, storage of supplies, etc. This courtesy was particularly gratifying in that much time which would otherwise have been devoted to obtaining odds and ends and performing administrative duties was thus saved and made available for test purposes.

While at Duluth, members of the Flight were paid their per diem allowance for the first ten days of the flight, as was done thereafter each succeeding ten days, this being the first time on record such a payment had ever been made during an expedition of this nature. The details of this payment were worked out by Capt. H.S. Farish, Finance Department, the Finance Officer of Selfridge Field, and Capt. Arthur G. Hamilton, who acted as his Agent Finance Officer during this flight. Staff Sgt. Carr performed the necessary administrative duties as Finance Sergeant.

While the Flight was at Duluth, it was joined by Lieut. Frank D. Klein in an O-43 from Wright Field. He continued on with the Flight from that point, and brought with him the propane gas with which to prime the engines. Under actual test it failed to give satisfactory performance.

The News Letter Correspondent remarks that the craze for writing on airplane wings, fuselages, tails, fins, etc., seems to be stronger than ever, and he observed some members of the flight copying the addresses which were written in a feminine hand.

One other piece of equipment taken along for test purposes and which did not pan out was the heat gun or hot air heater. It was used in an attempt to melt

V-6739, A.C.

snow which had accumulated in the tails of several planes.

Operations from fields covered with heavy snows indicate that airplane fuselages should be more tightly sealed around the tail post. On some planes from 100 to 200 pounds of snow had accumulated in the tail section, making them particularly difficult to handle.

The entire Flight departed from Duluth at 2:20 p.m., on February 12th, and from this point onward the railroad was followed as closely as was consistent with good conditions, in view of the widely scattered houses. During the course of this flight, many interesting conversations over the radio were carried on, particularly with reference to the terrain over which the flight was operating. Not having any radio equipment, the P-12 element, on leaving Duluth, was dispatched to Hibbing, Minn., to try out the airport which was covered with four feet of snow. It was reported from Hibbing that the airplanes performed excellently under the conditions there encountered.

One of the interesting bits of radio conversation overheard was between Capt. Hamilton to Col. Royce. The Captain was flying the fast B-12 Bomber, and he said: "The P-26's have passed us, the P-12's and Observation have gone by, the Attack is just going by. Now, then, under ordinary circumstances without these skis we could outrun any of you, but, by golly, if the Transports go by I'm going to jump!"

On arrival at Grand Forks, N.D., the Flight was serviced from 50-gallon drums by hand pump. It took three hours to finish this task, it being well after 7:30 p.m., when the last mechanic departed from the field.

For some of the personnel, the morning of the 13th was the last day on which all the planes could be seen, and the departure from Grand Forks was the beginning of a series of adventures and races which lasted until the Flight returned to Selfridge Field.

The P-26's and the B-12's, having taken off at 9:00 a.m., arrived at Minot, N.D., and were refueled by the time the remainder of the Flight arrived at 11:00 a.m. Minot was scheduled as an overnight stop, but feeling that cold weather was about to set in at Great Falls, Montana, every effort was made to assemble the Flight at that point, so the P-26's and B-12's proceeded to Great Falls, via Glasgow. The remainder of the Flight decided to remain overnight at Minot.

The morning of the 14th found five airplanes in Great Falls with an extremely high temperature of 56 degrees. At Minot there was a temperature of 20 degrees, which swiftly went up to 30 and brought snow with it. At nine o'clock an effort was made to get off the ground. Lieuts. Taylor and Piper,

in two P-12K's got off, made a turn at the far corner of the airport, and were lost to view in the fog. Following the railroad, they arrived at Glasgow, and in the afternoon continued on to Great Falls. When the snow commenced, the remainder of the Flight returned to the hotel and sat around the lobby watching the progress of the two P-12's as the station agents up and down the main line of the Great Northern OS'd them past.

The Flight at Minot was again fog-bound on the 15th, but the section of the Flight at Great Falls moved out on a tactical mission to Butte and return to obtain experience in mountain flying and to search for colder weather.

Maj. March, the Flight Surgeon, and his enlisted assistant were with the Transports at Minot, as was the entire enlisted staff, and this separation seemed to be the beginning of a game between pilots and mechanics of the Pursuit ships, apparently all trying to see who could stay away from each other the longest. Minus the services of his mechanic for the greater portion of the time since leaving Selfridge Field, Lieut. Partridge served notice that he was qualified to take the air mechanic's examination.

At 9:00 a.m. on the 16th, the Flight at Minot departed for Glasgow, arriving three hours later. Lieut. Kelly, in his P-12K, was acting as the advance man and, despite the fact that he passed directly over the airport at Glasgow on three different occasions, finally landed in the yard of the high school and asked the direction to the airport. Refueling at this point was also accomplished by hand pump from 50-gallon drums and caused much delay. The photographer went aboard an O-43, was flown over the Fort Peck Dam Project, and obtained about 30 excellent plates of this \$100,000,000 flood control and irrigation dam.

The P-12 and the Observation planes had no particular difficulty taking off from the heavy snow in this high altitude, but the A-12's and C-27's commenced a "Ring-around-the-rosy". After about a dozen attempts, one A-12 and the two C-27's were still hugging terra firma. The continued use of full throttle finally resulted in the engine in Lieut. Bunker's A-12 burning out, while the "Cyclone" in Capt. Nelson's C-27 became weaker each time he tried to get off. Lieut. Stace's C-27 finally ran into a boundary marker at high speed, and several braces were torn out of the fuselage structure.

Removing the skis from his plane and reducing its load by 700 pounds, Capt. Nelson took off in a reasonable distance, but, after flying 20 minutes on the way to Great Falls, the full throttle work exacted its toll and he was forced back to Glasgow a short time before the engine gave up the ghost.

The section of the Flight already at Great Falls made a trip to Helena, where all members thereof were introduced in

the Montana Senate and House of Representatives, taking seats in the Rostrum during a short joint session of these bodies.

When the Observation and Attack ships arrived at Great Falls during a heavy dust storm and were informed that the remainder of the Flight was in Helena, one pilot remarked that he did not miss the trip since he had not only seen Helena but also Seattle and San Francisco go by in the dust.

On the morning of February 17th, with the possibility of cold weather definitely out of question, the entire Flight departed from Great Falls to Miles City, Montana, leaving Lieut. Kemmer and three enlisted men to change an engine on a B-12 which had burned out due to excessive use of full throttle. The C-27, with the damaged fuselage, at Glasgow was being repaired there by the crew chief and the six mechanics aboard, while the other C-27 and one A-12, also stranded there, awaited new engines to replace those burned out the previous day.

The P-12K element was dispatched by way of Lewistown, Montana, to conduct a tactical problem en route to Billings, but the remainder of the Flight proceeded to Billings along the mountain range. This flight was undoubtedly the roughest portion of the journey. A terrific dust storm, helped along by a 35-mile wind, with exceptionally strong gusts, made flying anything but comfortable. Sticks were torn from pilot's grasps and airplanes rocked violently as they drifted through the alternate rising and falling strata.

The morning of the 18th again found the Flight facing a dust storm and heavy winds. On the way from Billings to Miles City, the Flight passed over the site of Custer's Last Stand, the spot where every soldier in the battle fell being marked with a small monument. The course of the battle was followed up a ravine, where markers here and there indicated that stragglers had been picked off one by one until only a large group of approximately 20 monuments indicated the last stand. The O-43's and A-12's were dispatched over the battlefield and dipped their wings in salute at the site of the main body's stand. The people of Miles City extended a hearty greeting to the Army airmen.

The usual morning dust storm with its attendant high winds greeted the Army airmen on the morning of the 19th, but no particular difficulty was experienced starting the engines or taking off. An inspection of the skid revealed that the gravel airports in this part of the country were beginning to impose wear on the ski surfaces and the heel shoes.

At Bismark, N.D., the next stop, Infantrymen were on duty to maintain order. After refueling, the Flight at-

tempted to move out but found it very hard to taxi amidst the swirling of gravel and dust of a 40-mile gale, which was a new experience for them.

Sgt. Peterson, Capt. Giffin's mechanic, jumped out to assist in pushing the tail around. After the airplane started moving, the pilot opened the throttle and took off, forgetting all about his mechanic. Lieut. Kyle waved his hand, motioned the Captain back, but the latter, thinking this was some new game, waved right back at him. When about 15 minutes out of Bismarck, the airplane hit a particularly rough bump. Instinctively, the Captain looked around and, failing to see his mechanic, thought for a moment that he had been thrown out. Then it dawned upon him that he had taken off without him, and he proceeded to lead his element back to Bismarck.

This loss of 15 minutes' time deprived members of this element of hotel comfort for the night. The rest of the Flight reached Fargo, N.D., although the P-12K's were forced to land without looking the field over and one Bomber landed blind. Capt. Giffin's Observation element ran into a terrific snowstorm off the edge of the Fargo airport and was forced back to the town of Barnesville, N.D., where they landed in a small field. There being no hotel accommodations in the town, the fliers were finally put up by the Sheriff, and they slept through the night with one eye open.

The limited area of the field was forcefully brought to the attention of the element the next day, following the cessation of the storm. It was necessary to lighten the airplanes and ferry the equipment by truck to a field approximately one mile distant in order to take off.

On the morning of the 20th, one C-27 departed from Glasgow and reached Fargo five hours later. The main portion of the Flight departed from Fargo an hour before noon for St. Paul, Minn. On this flight, failure of cylinder rings in the engine of Lieut. Piper's plane caused the loss of its entire oil supply, and he was forced to land at St. Cloud, Minn. Lieut. Klein was dispatched to St. Cloud to ferry Lieut. Piper to St. Paul.

Making use of the National Guard facilities at the St. Paul Airport, the mechanics proceeded to busy themselves on the airplanes. Forty-hour inspections were made, broken parts replaced and the airplanes prepared for the last long drive homeward. From tests on the ground it developed that all engines, except the V-1570's, had lost much of their power. The Bomber left at Great Falls arrived at Fargo this date, while the C-27 at Glasgow arrived at Minot, where it was held for repairs, for Lieut. Bunker, in executing a take-off, crumpled a wheel.

Leaving Fargo, the C-27 joined the main flight at St. Paul, and pilots and mechanics met for the first time since February 13th. The crew chiefs went to

work with a will to clean up the planes for the last week of operations.

Work on the airplanes continued on the 22nd. Considerable difficulty was experienced in starting the engines in the Bomber which had arrived at Fargo on the 21st, due to the high wind and the minus four degrees temperature, but it finally reached St. Paul at 3:00 p.m. Lieut. Bunker's C-27 flew from Minot to Fargo with an extremely weak engine, and its chances of finishing the flight seemed doubtful.

February 23d found the Pursuit flight (less Lieut. Piper in his P-12K), the Observation Flight and the two remaining Attack ships departing for Wausau, Wis., where snow was again encountered.

On the way to Manitowoc the next day, the Observation flight encountered a severe snowstorm and was forced to turn back to Green Bay. Later an attempt was made to get through and, while making a turn, Lieuts. Ott and Klein became lost on the outside of the turn and continued on through the storm to Manitowoc.

At Green Bay a blizzard caught the flight on the ground. Due to the lack of cockpit covers, the front and rear cockpits filled up with snow. The two-foot snowfall, accompanied by the high wind, caused many drifts around the airplanes, and everyone was forced to dig out the following day. "Sun Dogs" were again in evidence that day, as well as the following day.

The flight reached Manitowoc on the 24th and, after servicing, an attempt was made to get away. The attempt was soon abandoned, for the poor gas here not only prevented the engines turning up their full r.p.m.'s, but caused such an excessive loss of power that it was necessary to drain all the gas from the tanks and flush the lines. The Flight was at a standstill until suitable aviation gasoline was expressed from Chicago.

The poor gasoline put the finishing touches on Lieut. Piper's ailing engine, and it was with extreme difficulty that he took off for Chicago, in order to return to Selfridge before changing engines. Ten miles from Chicago the engine started throwing oil through the exhaust stacks, and he was forced to leave his P-12 in Chicago for an engine change. The wheels on the C-27, piloted by Capt. Nelson, were removed, and tests were run on the heavy snow at Manitowoc, using the plain ski only.

Manitowoc being the last testing point, the flight separated, some planes proceeding to Newberry for fuel, and others to Selfridge Field, via Chicago. The main portion of the Flight arrived at Selfridge Field about 6:30 p.m., February 28th, terminating a very eventful flight and leaving only two or three

ailing aircraft to proceed homeward in a more or less leisure manner.

Although the personnel encountered many hardships during the entire month spent in combatting the elements in the frigid Northwest, the flight was not without its enjoyable incidents, for the men attended many luncheons, dinners and dances given in their honor by the citizens of the various communities where stops were made.

Among the conclusions, arrived at as a result of this flight were:

The abandonment of all cold starting, since it imposes too great a strain on the engines, and, in lieu of this, to heat the engines by firepots.

The necessity for redesigning of wheel skis for heavy ships to permit their cruising closer to their normal rated speed.

The priming of a greater number of cylinders during cold weather, although this is a desirable feature at all times.

Redesigning of engine covers, since the covers tested were entirely unsatisfactory.

Further development of winter flying equipment. The redesigning of cockpit and cabin heaters would probably eliminate many of the problems now facing the Equipment Board with reference to winter flying clothing.

Tightening up the fuselages on all types of aircraft to keep snow out of tails.

A study of the problems concerning working clothing for enlisted men during cold weather.

The abandonment of all light grade oils for winter flying, because of undue wear on engines.

Development of an air filter for use when encountering dust storms in the Northwest territory.

Further development of the self-buckling riveting device.

Design of suitable airplane ambulance for snow operations.

Development of portable office equipment for installation in Transport airplanes for use on long trips of this nature.

The interesting sidelights of the trip were the requests made upon Col. Royce at every stop to make speeches, assisted by his slides, on the Alaskan Flight and the present flight before men's clubs and high school students; his flying of different types of ships each day after his own was lost at Portage Lake; the excellent cooperation received from other branches of the service, particularly the Corps of Engineers; the interest in the flight manifested by the CCC Camps, the personnel of which endeavoring to do everything in their power to help the Flight with its problems; the excellent cooperation from railroads and air transport companies who checked the Flight when it was scattered and assisted it in obtaining weather data, and the conclusion reached that Pursuit can operate over any territory for any length of time, using wheel skis.

GOVERNMENT TOTAL DISABILITY INSURANCE

The Veterans Administration has recently furnished the following information to the Office of the Chief of the Air Corps relative to the Government Total Disability Policy, which may be applied for by holders of any form of Government Life Insurance Policies. The benefits of the Government Total Disability Policy are entirely independent of and in addition to any of the benefits of the Government Life Insurance Policies, and such benefit payments do not affect the face value of the later policies.

Upon the presentation of proof of total disability satisfactory to the Administrator, the Government Total Disability Policy pays to the insured the amount of \$57.50 per month during such periods of total disability; also all premiums becoming due on all Government Policies are suspended during such periods.

If a person holding a Government Life Insurance Policy, to which there has been attached a total disability rider, becomes totally disabled as a result of disease or injury and is continuously so disabled for a period of four consecutive months or more before attaining the age of sixty-five, and before default in the payment of any premium, and is so rated for insurance purposes by the Veterans Administration, such insured would be entitled to benefits, regardless of whether or not he is in the active service.

The fact of retirement from active service by reason of a disability does not necessarily constitute total disability for insurance purposes. The findings of a War Department Medical Board or reports of examinations by medical officers of the War Department is of aid to the Veterans Administration in making a determination as to total disability; however, the Veterans Administration reserves the right to examine and rate the insured-claimant before authorizing the payment of any benefits.

GOVERNMENT LIFE INSURANCE FOR RESERVE OFFICERS

A part of Section 300 of the World War Veterans' Act, 1924, as amended, is quoted below as being of interest to Reserve Officers:

"In order to give to every commissioned officer and enlisted man and to every member of the Army Nurse Corps (female) and of the Navy Nurse Corps (female) when employed in active service under the War Department or Navy Department protection for themselves and their dependents, the United States, upon application to the bureau and without medical examination, shall grant United States Government life insurance (converted insurance) against the death or total permanent disability of any such

person in any multiple of \$500, and not less than \$1,000 or more than \$10,000, upon the payment of the premiums as hereinafter provided. Such insurance must be applied for within one hundred and twenty days after enlistment or after entrance into or employment in the active service and before discharge or reinstatement."

Reserve Officers on active duty for sixteen days or more may apply for Government Life Insurance within 120 days from entrance upon active duty and before release from such duty.

---oOo---

TACTICAL SCHOOL OFFICERS ADVANCED IN RANK

Effective March 11, 1935, 22 Air Corps officers on duty at the Air Corps Tactical School at Maxwell Field, Alabama, were advanced in rank, the Chief of the Air Corps having certified that no officers of suitable permanent rank are available for the duties being performed by these officers.

Captain Harold L. George, Chief, Air Force Operations Section, was advanced to Lieut.-Colonel.

The following Captains, who are Chiefs of Sections, were promoted to Major:

John I. Moore, Air Corps Extension Sec.

Lotha A. Smith, Attack Section.

Claire L. Chennault, Pursuit Section.

Grandison Gardner, Corps & Army Observation Section.

Frederick W. Evans, Observation Sec.

Emil C. Kiel, Communications Section.

Odas Moon, Bombardment Section.

Other officers promoted to Major, and their assignments, are:

Captain Austin W. Martenstein, chief, Personnel and Logistics.

Captain Warren R. Carter, Chief, Air Intelligence.

Captain Sigmund F. Landers, Executive Officer.

Captain Melvin B. Asp, Engineering Officer.

Captain Clarence F. Horton, Supply Officer.

The following Squadron Commanders were promoted to Major:

1st Lieut. Charles D. McAllister, 87th Pursuit.

Capt. Lloyd C. Blackburn, 51st Attack

Capt. Rufus B. Davidson, 54th Bomb.

Capt. Kenneth C. McGregor, 86th Obs.

1st Lt. Arnold H. Rich, 84th Service.

First Lieutenants advanced to the rank of Captain were:

Julian B. Haddon, Secretary.

Ernest S. Moon, Adjutant.

Ralph A. Snively, Operations Officer.

Frank F. Everest, Jr., Intelligence and Operations Officer, 51st Attack Squadron.

---oOo---

INSTRUMENT FLYING FOR AIR CORPS NATIONAL GUARD INSTRUCTORS

The Secretary of War, on the recommendation of the Chief of the National Guard Bureau, announced that a special two weeks' course in instrument flying will be given at Rockwell Field, Coronado, Calif., beginning March 20th, for all Air Corps Regular Army Instructors on duty with National Guard Air Squadrons. This special course is in line with the present policy that all air units of the National Guard should be thoroughly trained and equipped for flying under all weather conditions. In this refresher course, all of the instructors will become acquainted with the latest methods and developments in equipment and will be better fitted to carry out their mission with the National Guard Air Corps.

The following Air Corps officers (Instructors) have been selected to attend, all of them, with the exception of 1st Lieut. Louis M. Merrick, having the rank of Captain:

Name	Organization	State	Station	City
Ronald Hicks	31st Division	Alabama	Roberts Field	Birmingham
Charles A. Horn	154th Obs. Sqdn.	Arkansas	Little Rock Airport	Little Rock
Eugene B. Bayley	40th Division	California	Griffith Park	Los Angeles
Norman D. Brophy	45th Division	Colorado	Lowry Field	Denver
Louis M. Merrick	43rd Division	Connecticut	Brainard Field	Hartford
Morrill D. Mann	33rd Division	Illinois	Municipal Airport	Chicago
Guy H. Gale	38th Division	Indiana	Stout Field	Indianapolis
David R. Stinson	26th Division	Massachusetts	Boston Airport	East Boston
Harry H. Mills	32nd Division	Michigan	Wayne Co. Airport	Romulus
Arthur I. Ennis	34th Division	Minnesota	Holman Airport	St. Paul
Arthur Thomas	35th Division	Missouri	Lambert Field	Robertson
William J. McKiernan	44th Division	New Jersey	Newark Airport	Newark
Ross F. Cole	27th Division	New York	Miller Field	New Dorp, Staten Is.
Charles Backes	37th Division	Ohio	Municipal Airport	Cleveland
Richard H. Magee	28th Division	Pennsylvania	Philadelphia Airport	Philadelphia
Wendell B. McCoy	30th Division	Tennessee	Sky Harbor	Murfreesboro
Thomas W. Blackburn	36th Division	Texas	Municipal Airport	Houston
Robin A. Day	41st Division	Washington	Felts Field	Parkwater

---oCo---

PROTECTION AGAINST MOSQUITOES

Captain Bernard J. Toohar, Air Corps, Technical Supervisor of the Middletown Air Depot Control Area, in a discourse on the subject of a well known insect pest, writes as follows:

"The question of protection from mosquitoes is given little thought by the average pilot until he finds himself, through some bit of bad luck, up against the proposition of fighting them off with whatever materials are at hand. I have had too many hunting and fishing trips turned from pleasurable excursions into periods of inconvenience ranging from annoyance to misery simply because the party forgot to provide itself beforehand with something more resistant to their attacks than wood-smoke or improvised headnets cut from the tent mosquito bar. Nor, except in the north in the extreme dead of winter, is there any assurance that a district will be free from the pests. Snow on the ground is no help; I have seen as many mosquitoes during the spring break-up in the north as I ever saw in the Florida Everglades, and they had, as very mean cohorts, legions of black flies and midges. In case of a forced landing in infested country, especially if personnel are injured, attacks by these insects may result not only in torture but death.

Three preparations or "dopes" are here presented. These will cover all situations. The first contains a repellent and an ingredient to render this repellent more agreeable to the user without hindering its effect on the insect. The latter two contain, in addition, a

substance to give body to the dope and prevent too rapid evaporation of the repellent.

a. This is a light liquid deterrent. Carried in a small vial, it is to be used if bothered by mosquitoes in hotel bed rooms or when working on planes in the evening. It should be about as follows: one ounce of citronella, one ounce spirits of camphor and one half ounce oil of cedar. Pennyroyal may be substituted for spirits of camphor. The effect of this mixture, daubed on hands, face and neck is temporary, and the application must be frequently renewed. It is of little value in the presence of a concentration of the enemy forces or during prolonged periods of attack.

b. The following is less pleasant to use but will work a lot better: one ounce oil of citronella, one half ounce oil of cedar or oil of pine, and both ingredients mixed with four ounces of vaseline or lanoline. Either latter ingredient must, of course, be heated.

c. The best preparation for serious use is a rather disagreeable mixture concocted with the following: two pounds of mutton tallow, heated and strained; one half pound of black tar (Canadian or pine tar), to be added to the tallow while the latter is hot. Stir thoroughly and when nearly cool stir in four ounces of oil of citronella and two ounces of pennyroyal. This mess, if it is to be used by all hands around a hunting or fishing camp, is cooled in the jar from which it is to be used. If it is to be divided into various containers, as it would

normally be when distributed among personnel of a flight, it should be handled before cold. The Canadian tar is added to make this stuff set in a sort of dark glaze. When applied in a couple of coats it is almost impenetrable to the mosquito or black fly even after the odor of citronella, the active repellent in all these dopes, has worn off. It should not be

washed off while in enemy country. It won't improve your looks, but a visage lumpily contoured with mosquito bites is no prize subject for an art photograph either.

d. Incidentally, if bitten, the application of the wetted end of a piece of soap is about as good as anything.

---oOo---

THIRD ATTACK GROUP MOVES TO BARKSDALE FIELD

When Colonel Gerald C. Brant, now Commanding Officer of the Third Wing, landed at Fort Crockett, Galveston, Tex. on the afternoon of February 18th and issued orders for the immediate removal of the 3rd Attack Group to Barksdale Field, it climaxed two years of expectant waiting on the part of the personnel of the Group, who expected to move to that field upon its completion.

An advance detachment departed from Fort Crockett by air on the morning of the 19th, and the ferrying of the Attack Group's airplanes began at the same time. The initial ferry flights were led by 2nd Lieuts. K.R. Crosher for the 8th Attack Squadron; F.E. Calhoun for the 13th and G.M. Murchison for the 90th. The advance party was strengthened by additional men during the week following, the necessary equipment being transported by air.

All of the A-12's, training planes and other aircraft of the Group were immediately transferred to the new station, with the exception of planes on maneuvers, others temporarily out of commission, and one command plane. Transports of the organizations were in continuous use between the two stations.

The 8th, 13th and 90th Attack and the 60th Service Squadrons, together with the Third Attack Group and Wing Headquarters, were represented at Barksdale Field by detachments until the full strength of these organizations arrived on February 27th by troop train, motor convoy and private automobiles. At the time, 105 men arrived by train, 135 by convoy and 235 by private cars. The troop train was commanded by Capt. E.M. Morris, and the motor convoy by 1st Lieut. Don W. Mayhue.

Advance parties made all arrangements for the main body to move directly into its new quarters. Kitchens were ready for operation upon its arrival, and the entire Group settled quietly into its new base, ready for the reorganization of the Third Wing.

Major Earl L. Naiden, Commanding Officer of the Third Attack Group, remained at Fort Crockett until the evacuation of this post was completed, flying to Barksdale Field on the morning of

February 28th.

Colonel Brant assumed command of Barksdale Field on February 26th, and of the 3rd Wing on March 1st.

---oOo---

DUKE OF GLOUCESTER VISITS ALBROOK FIELD

Albrook Field was the scene of much activity, pomp and ceremony on March 4th, when Prince Henry, Duke of Gloucester, third son of the King of England, took off from there for an hour's flight to view the Panama Canal from the air.

Prince Henry was enroute from Australia to Jamaica. He remained in the Canal Zone only about 12 hours, and Albrook Field was the only Army post he visited.

The Air Corps troops of Albrook Field, in their best inspection uniforms, composed the guard of honor. On the Duke's arrival, following a salute of 21 guns, he was welcomed to the post by the Department Commander, Major General Harold B. Fiske; the 19th Composite Wing Commander, Colonel W.C. McChord, and Major Robert L. Walsh, commander of the 16th Pursuit Group. As the guard saluted, the flourishes and ruffles, followed by the British National Anthem, were played by the 33rd Infantry band, loaned for the occasion. The Prince inspected the guard and complimented its commander very highly on the appearance and set-up of the Air Corps soldiers.

Two Douglas Amphibians were on the ramp to take the Prince and his party over the Zone. The Prince flew with the British Minister in a Naval airplane piloted by Lieut.-Commander Ralph E. Davison. His party, consisting of Major-General Howard-Vyse, Captain Curtis, Captain Kerr, Captain Schreiber, E.A. Cleugh and A.M. Williams, flew in the second amphibian, piloted by Lieut. C.W. Cousland, Air Corps. The party was escorted by a flight of six P-12's commanded by Captain Frank O'D. Hunter.

On his return, Prince Henry expressed himself as being deeply grateful for the courtesies shown him and called for the pilots of the amphibian and the commander of the Pursuit escort to thank them personally for accompanying him.

GENERAL PRATT ASSUMES COMMAND OF THE 2ND WING

Brigadier-General Henry C. Pratt, Air Corps, who was appointed to that rank by virtue of his being assigned on March 1st to the command of the Second (East Coast) Wing, recently departed for Langley Field, Va., to take over his new duties. He had been for some time on temporary duty in the Office of the Chief of the Air Corps conferring on various Air Corps matters.

General Pratt is an officer of broad military experience who has contributed his share in bringing the Air Corps to its present state of efficiency.

He joined the aviation branch of the Army during the World War, being appointed a Major in the Aviation Section, Signal Corps, on August 5, 1917, and assigned to duty at Kelly Field, San Antonio, Texas. During the War, General Pratt served brief tours of duty at Call Field and Brooks Field, Texas; in the Executive Section of the Office of the Director of Military Aeronautics, Washington, D.C., and with the A.E.F. in France on special duty.

Returning to Washington in December, 1918, he was assigned to duty as a member of the Board on Peace Organization and, upon completion of that work, was detailed as a member of the Advisory Board, serving therewith until August 31, 1919. He was then assigned as a special student at the General Staff College, Washington Barracks, D.C., and graduated therefrom on June 29, 1920.

General Pratt's next assignment was at Kelly Field, Texas, in command of the First Aero Wing. He served at this field until September, 1920, when he was assigned as Air Officer of the 8th Corps Area, Fort Sam Houston, Texas.

Although he learned to fly while at Brooks Field during the War, General Pratt, desirous of obtaining specialized flying training, was assigned to duty at Kelly Field as a student in Bombardment training in April, 1921. Upon the completion of this training, he was assigned to duty as a student at the General Service School, Fort Leavenworth, Kansas, graduating in June, 1923. From Fort Leavenworth he proceeded to the Army War College, Washington, D.C., and graduated from this institution on June 30, 1924.

For the next four years, General Pratt was on duty in the Office of the Chief of the Air Corps, first as Chief of the Training and War Plans Division, and later as Executive of the Training and Operations Division.

On June 1, 1928, he was assigned as Commanding Officer of Mitchel Field, New York, and of the 9th Observation Group. August 1, 1929, saw him trans-

ferred to the Hawaiian Department for duty as Air Officer. He held this office until July, 1930, when he was appointed Brigadier-General and Assistant Chief of Air Corps and assigned to duty at Wright Field, Dayton, Ohio, as Chief of the Materiel Division. Upon the termination of his four-year appointment, he reverted to his regular rank of Lieut.-Colonel.

General Pratt was born in New Mexico on September 2, 1882. He attended the Pennsylvania Military College for one year and was then appointed to the United States Military Academy. Upon his graduation in June, 1904, he was commissioned a second lieutenant of Cavalry. His service with the Cavalry branch of the Army was continuous until his appointment in the Aviation Section, Signal Corps, during the War to the rank of Major. He reached the rank of 1st Lieutenant on March 30, 1911; Captain, July 1, 1916; Major, July 1, 1920, and Lieut.-Colonel, June 20, 1928, all these constituting permanent promotions. During the War he held temporary rank as Lieutenant-Colonel and Colonel.

General Pratt commanded the Air Corps Maneuvers at Wright Field, Ohio, in 1929. He served on many important boards during his military career and received high commendation for his valuable work during the War.

He holds the flying ratings of "Airplane Pilot" and "Airplane Observer."

---oOo---

HONOR PAID TO DECEASED WAR-TIME FLYER

Approximately 400 people congregated at Hamilton Field, Calif., on Sunday, March 3rd, from the Bay districts to honor the memory of 1st Lieut. Lloyd Andrews Hamilton, after whom the Marin County flying field is named.

Past Department Commander Warren Atherton of the American Legion, State of California, dedicating the bronze plaque to Lieut. Hamilton, stressed that the deceased had been the victim of national unpreparedness. Lieut.-Colonel Clarence L. Tinker, in response, emphasized the destructive elements within the nation and hoped that this would be the dawn of a new day in which our fitness for war would sweep aside the possibility of armed conflict. Then, at the request of Mr. Don Burbeck, 5th District Commander, American Legion, the listeners bowed their heads for 30 seconds in reverence to the memory of Lt. Hamilton, who gave his life for his country as a war flyer at Lagnicourt, France.

TROPHIES AND AWARDS FOR ARMY PILOTS

In the leading article in this issue of the News Letter, announcing the award of the Mackay Trophy to Brigadier General Henry H. Arnold, a brief history is given of the first Army aviation Trophy, which was tendered in 1912 by Mr. Clarence H. Mackay to the Aero Club of America for award by the War Department annually to the officer or officers making the most meritorious flight of the year. The National Aeronautic Association, successor of the Aero Club of America, is the present custodian of this Trophy.

The next Trophy to make its bow to Army flyers was the one donated by former General William Mitchell, of the Air Service, in memory of John E. Mitchell, his brother, who was killed in action during the World War. The contest for this Trophy is a strictly military event for pilots of the First Pursuit Group of the Army Air Corps, and the winner retains it in his possession until the victor of the next year's contest is announced.

Thus far, ten contests have been staged, the first in 1922 during the Air Races held at Detroit, Mich., when the winner, Lieut. D.F. Stace, averaged a speed of 148 miles per hour. There were six competitors in this event, all piloting the MB-3 airplane.

The following year, during the International Air Races at St. Louis, Mo., the late Captain Burt F. Skeel carried off the honors, averaging a speed of 156 miles per hour.

Up to last year, the high speed record for this annual classic was held by the late Lieut. Cyrus Bettis, who in 1924, during the International Air Races at Dayton, Ohio, averaged a speed of 175.43 miles per hour.

In 1925, Lieut. Thomas K. Matthews won the Trophy with an average speed of 161.5 miles per hour. The race was held at Mitchel Field, N.Y., and the winner piloted a Curtiss PW-8 Pursuit plane.

In 1926, when the International Races were held at Philadelphia, Lieut. L.G. Ellicott, in a Curtiss P-1 Pursuit, averaged 160.45 miles per hour, and he held the Trophy for one year, relinquishing it to the late 1st Lieut. Irvin A. Woodring, who on October 12, 1927, at Fairfield, Ohio, when the Mitchel Trophy Race was one of the features incident to the dedication of Wright Field, averaged a speed of 158.968 miles per hour. Fifteen P-1 Pursuit planes entered the Race, and there was but one minute and 23 seconds difference in the time of the first and the last plane.

Lieut. B.H. Lawson won the 1928 contest, which was held during the International Air Races at Los Angeles, Calif., his average speed being 154.743 miles per hour.

At Cleveland, Ohio, in 1929, the

locale of the International Air Races that year, Lieut. Paul B. Wurtsmith was the winner of the Trophy, averaging 152.17 miles per hour.

In 1930 the Mitchel Trophy Race was held at the home station of the First Pursuit Group - Selfridge Field - and 2nd Lieut. Louis A. Vaupre, winner of the contest, averaged 146.7 miles per hour.

No contest was held during the years 1931, 1932 and 1933, but last Fall, when the race was again held at Selfridge Field, Captain Fred C. Nelson eclipsed all speed records previously attained in the contests for this Trophy. As a matter of fact, this was the case with all the participants in the 1934 event. Captain Nelson averaged a speed of 216.832 miles per hour

The first competition for the General Mason M. Patrick was held during the Air Races at Los Angeles, Calif., in September, 1928. This Trophy was donated by the Hon. F. Trubee Davison, former Assistant Secretary of War for Aviation, as a perpetual memorial to General Patrick upon the latter's retirement as Chief of the Air Corps. Under the provisions of the gift, it was to be competed for annually by the commissioned pilots of the 3rd Attack Group.

This Trophy is a beautiful bronze plaque, 18 inches wide and 24 inches long. It is mounted on a piece of ebony. The upper half of the Trophy depicts a scene from the race. Planes are shown approaching, from the right, and a pylon at the extreme left. The lower half of the Trophy has been reserved for the purpose of recording the names of the winners from year to year. Seventeen pairs of wings are divided into five columns; the two outer columns have four wings each, while the three inner columns have three wings each. The columns are separated from each other by lighted torches. Each year the winner's name is engraved above one of the wings. At the base of the plaque is the following inscription:

Major General M.M. Patrick
For the Third Attack Group Race
Presented by F. Trubee Davison

Twelve pilots of the 3rd Attack Group participated in the first contest, all piloting the standard A-3 Attack plane, powered with the Curtiss D-12 engine, and the winner, Lieut. G.R. Acheson, averaged a speed of 139.525 miles per hour.

In 1929, when the Air Races were held at Cleveland, Ohio, 13 pilots of the 3rd Attack Group entered the competition. They piloted the identical type airplane flown the year before, but the speeds attained were considerably improved. Second Lieut. Ivan M. Palmer, the winner, averaged a speed of 149.020 miles per hour.

The contest for the Trophy in 1930 was held at Fort Crockett, Galveston, Texas, V-6739, A.C.

the home station of the 3rd Attack Group. Nineteen pilots of the Group participated, flying A-3B planes. The winner, Lieut. L.C. Westley, averaged a speed of 149.12 miles per hour over six laps of a 10-mile triangular course, or a total of 60 miles.

First Lieut. Don W. Mayhue won the 1931 contest, which was also held at Fort Crockett. His average speed was 142.59 miles per hour.

No contests for the Trophy have been held since 1931.

The Cheney Award was established in memory of 1st Lieut. William H. Cheney, Air Service, who was killed in an air collision at Foggia, Italy, January 20, 1918. The donors of this award are Mrs. Mary L.C. Schofield, Peterboro, N.H., and Mrs. Ruth Cheney Streeter, of Morristown, N.J., the mother and sister, respectively, of Lieut. Cheney, who have jointly set aside a trust fund of \$10,000, the interest accruing therefrom to be used to make up the cash award. It is to be bestowed annually by the Chief of the Air Corps for an act of valor or of extreme fortitude or self-sacrifice in a humanitarian interest which shall have been performed in connection with aircraft, but said act need not necessarily be of a military nature.

Those eligible to receive the Award are officers and enlisted men of the Air Corps, Regular Army; officers and enlisted men of the Air Reserve, and the widow or next of kin in the event of a posthumous award. Announcement of this award is made on January 20th of each year, that date being the anniversary of Lieut. Cheney's death.

A die of suitable design has been made, and bronze plaques are struck off each year the award is made, engraved with the name of the recipient as determined by the Cheney Award Board. An engraved Certificate, describing the meritorious act performed, is also given the recipient, together with a sum of money, usually \$500., the income derived from the trust fund after the necessary expenses in connection with the award have been defrayed.

The first award in 1927 was made to Master Sergeant Harry Chapman for conspicuous bravery in the Airship ROMA disaster, which occurred in February, 1922.

Awards for subsequent years were made as follows:

1928 to Lieut. Uzal G. Ent, Air Corps, for heroism during the National Elimination Balloon Race. He was aide to Lieut. Paul Evert, pilot of the Army balloon, and when it was struck by lightning, Lieut. Evert was killed and the balloon caught fire. Instead of jumping with his parachute, Lieut. Ent remained in the burning balloon, en-

deavoring to revive his companion, despite the danger of the balloon exploding at any moment.

1929. Lieut. William A. Matheny, Air Corps, for valor during an airplane crash in Nicaragua. He was pilot of a bombing plane being flown to Panama, Lieut. Dwight Canfield being co-pilot. Forced down in the jungles of Nicaragua, the plane caught fire. Lieut. Canfield, stunned and unable to move from the vicinity of the burning plane, he was rescued by Lieut. Matheny, who rushed into the flames and dragged him away from his perilous position.

1930. No award.

1931. Lieut. Robert D. Moor (posthumously). His conduct was that of "Noblesse oblige" of an officer pilot toward an enlisted passenger dependent upon him for security. During a flight, when his plane became disabled, Lieut. Moor, disregarding his own safety, managed to keep it under control long enough for his passenger to jump with his parachute, but too late to save himself.

Private John B. Smith. This was a case of loyalty and devotion toward an officer of his service. Trapped in the burning wreckage of a crashed plane, the helpless pilot was released therefrom only through the valiant efforts of Private Smith, who slid headfirst into the blazing cockpit and unfastened the pilot's shoe which was tightly wedged in the rudder bar.

1932. Private, 1st Class, Arden M. Farley. His act of valor occurred on December 6, 1932, near Pontiac, Mich., when he rescued 2nd Lieut. William H. Dum, Air Reserve, from a burning plane after a forced landing.

1933. To three men for the first time in the history of the Award, viz: 2nd Lt. Wm. L. Bogen, Air Reserve; Staff Sgt. Doy D. Dodd, 16th Service Squadron, and Sgt. Thomas J. Rogers, 19th Attack Squadron. The act of valor occurred at Fort Clark, Texas, May 4, 1933, when the plane piloted by Lieut. Bogen fell in a group of trees and burst into flames. These three men re-entered the burning airplane and saved the lives of two trapped passengers.

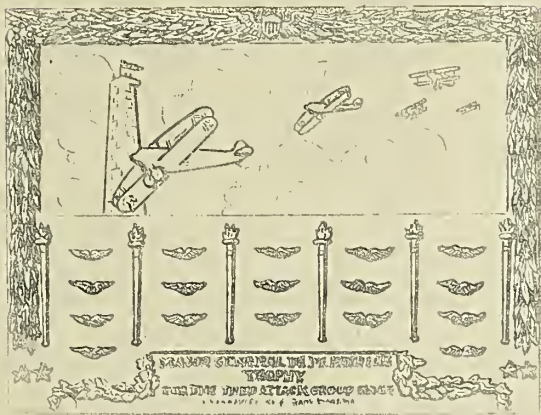
1934. No award. No act was considered outstanding, and the Chief of the Air Corps for the same reason the award for 1930 was not made, stated that it should not be cheapened by being awarded for any but a highly meritorious act.

---oOo---

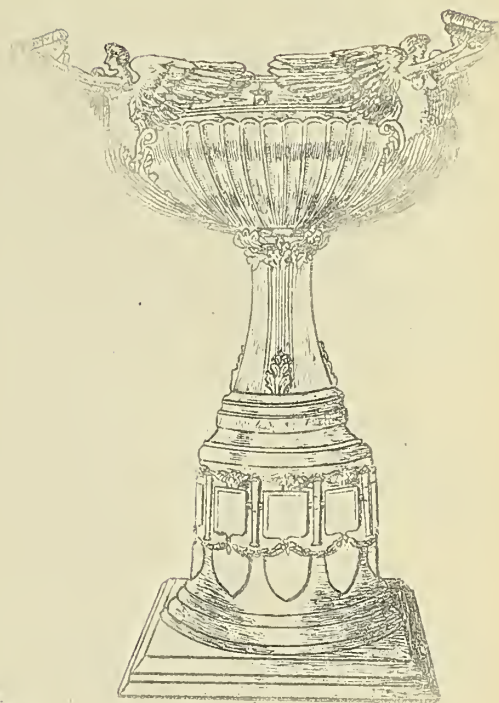
The accompanying pen and ink drawing of the three Trophies and the Cheney Award, above described, is the handiwork of Mr. Frank Dunnington, of the Information Division, O.C.A.C.

---oOo---

The cover design for this issue of the News Letter was made by Mr. "Bob" Fitzgerald, of the Technical Data Section, Materiel Division.



PATRICK TROPHY

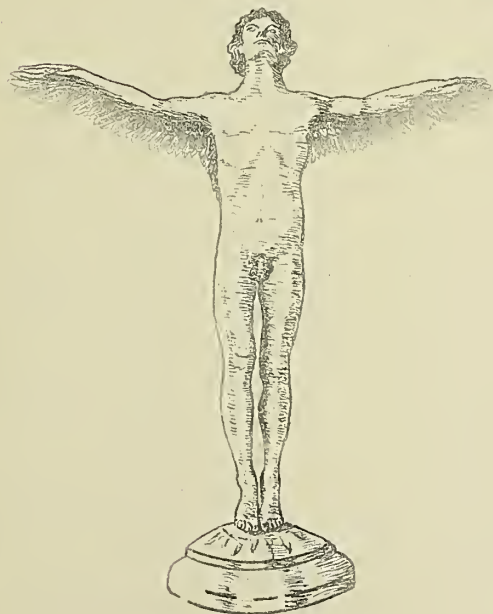


MACKAY TROPHY

AWARD AND TROPHIES

PRESENTED ANNUALLY TO

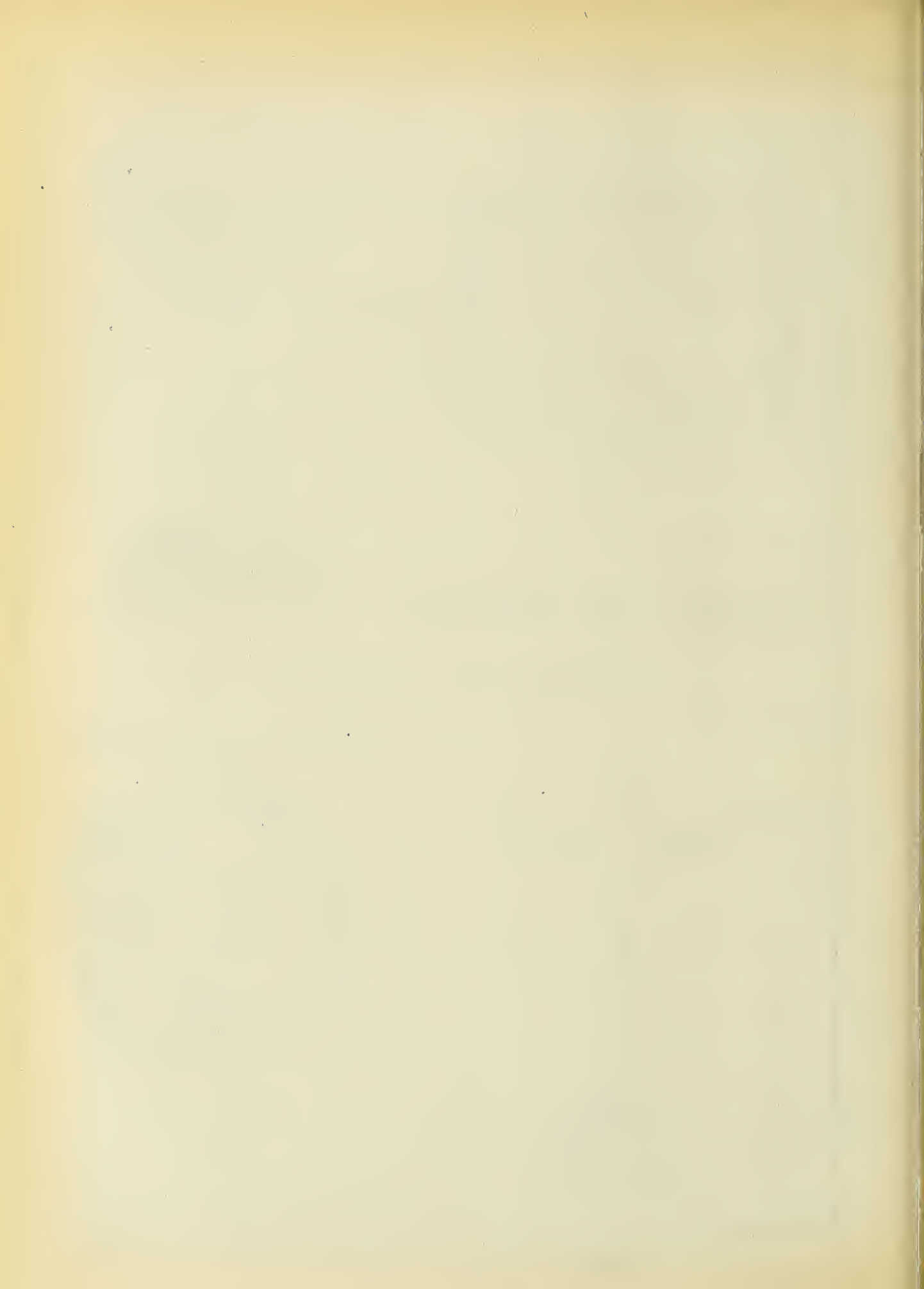
AIR CORPS PERSONNEL



MITCHELL TROPHY



CHENEY AWARD



PROMOTIONS FOR AIR CORPS OFFICERS IN HAWAII

Special Orders of the War Department, just issued, announce temporary advanced rank given Air Corps officers on duty with various units in the Hawaiian Department, effective March 12, 1935. The Chief of the Air Corps certified that no officers of suitable permanent rank are available for these duties. The advanced rank is effective for the period of each officer's particular assignment.

In the 18th Composite Wing, Major Michael F. Davis, Executive and Operations Officer, is advanced to Lieut.-Colonel, and 1st Lieut. Signa A. Gilkey, Assistant Operations Officer, to Captain.

Officers of the 5th Composite Group advanced in rank are Major Asa N. Duncan, Group Commander, to Lieut.-Colonel; Captain Phillips Melville, Intelligence and Operations Officer, to Major, and 2nd Lieut. Donald N. Yates, Adjutant, to First Lieutenant.

In the 18th Pursuit Group, Major Ernest Clark, Group Commander, is advanced to Lieut.-Colonel; Captain Clayton L. Bissell, Intelligence and Operations Officer, to Major; 1st Lieuts. James L. Daniel, Jr., Supply Officer, and John E. Bodle, Engineer and Armament Officer, to Captain; and 2nd Lieuts. Lauris Norstad, Adjutant, and Curtis E. LeMay, Radio Officer, to First Lieutenant.

Squadron officers advanced in rank are enumerated below, as follows:

Squadron Commanders (All Captains)

<u>Name</u>	<u>Squadron</u>	<u>Temp. Rank</u>
Frank H. Pritchard	4th Obs.	Major
Early E.W. Duncan	6th Pursuit	"
James E. Duke, Jr.	19th Pursuit	"
Arthur G. Liggett	23rd Bomb.	"
Samuel G. Frierson	26th Attack	"
Lucas V. Beau, Jr.	50th Obs.	"
Wolcott P. Hayes	65th Service	"
John V. Hart	72nd Bomb.	"
Roscoe C. Wriston	75th Service	"

Flight Commanders (All 1st Lieuts.)

<u>Name</u>	<u>Squadron</u>	<u>Temp. Rank</u>
Elmer J. Rogers, Jr.	4th Obs.	Captain
Fay R. Upthegrove	4th Obs.	"
Ray H. Clark	6th Pursuit	"
John C. Crosthwaite	6th Pursuit	"
Bryant L. Boatner	6th Pursuit	"
George H. Sparhawk	19th Pursuit	"
Russell Keillor	19th Pursuit	"
David P. Laubach	19th Pursuit	"
Robert D. Johnston	23rd Bomb.	"
Delmar T. Spivey	23rd Bomb.	"
Harvey F. Dyer	26th Attack	"
Homer L. Sanders	26th Attack	"
Harold G. Peterson	50th Obs.	"
Murray C. Woodbury	50th Obs.	"
Charles F. Born	72nd Bomb.	"
Reginald Heber	72nd Bomb.	"

Supply Officers (All 2nd Lieuts.)

<u>Name</u>	<u>Squadron</u>	<u>Temp. Rank</u>
Richard H. Wise	4th Obs.	1st Lieut.
John K. Gerhart	23rd Bomb.	"
Joseph F. Carroll	50th Obs.	"
Louis A. Guenther	72nd Bomb.	"

Communications Officers - All 2nd Lieuts.

<u>Name</u>	<u>Squadron</u>	<u>Temp. Rank</u>
Charles F. Densford	4th Obs.	1st Lieut.
Russell H. Griffith	6th Pursuit	"
Leo P. Dahl	19th Pursuit	"
Richard C. Hutchinson	26th Attack	"
Robert A. Stunkard	50th Obs.	"

Engineer Officers - 1st Lieutenants

<u>Name</u>	<u>Squadron</u>	<u>Temp. Rank</u>
Waldine W. Messmore	65th Service	Captain
Aubrey L. Moore	75th Service	"

Engineer Officers - All 2nd Lieutenants

<u>Name</u>	<u>Squadron</u>	<u>Temp. Rank</u>
William J. Clinch, Jr.	4th Obs.	1st Lieut.
Mark E. Bradley, Jr.	6th Pursuit	"
Thomas D. Ferguson	26th Attack	"

Intelligence and Operations Officers - all 1st Lieutenants

<u>Name</u>	<u>Squadron</u>	<u>Temp. Rank</u>
Morris R. Nelson	6th Pursuit	Captain
Glenn O. Barcus	19th Pursuit	"
Ralph E. Koon	23rd Bomb.	"
Robert Loyal Easton	26th Attack	"
Ford J. Lauer	72nd Bomb.	"

Armament Officers - All 2nd Lieutenants

<u>Name</u>	<u>Squadron</u>	<u>Temp. Rank</u>
Carl W. Carlmark	4th Obs.	1st Lieut.
Llewellyn O. Ryan	6th Pursuit	"
Julian M. Chappell	50th Obs.	"
D.L. Kilpatrick, Jr.	72nd Bomb.	"

Addenda. Second Lieut. William L. Kennedy, Engineer Officer, 23rd Bomb. Squadron, promoted to 1st Lieutenant.

Officers on duty at the Hawaiian Air Depot, who were advanced in rank, are - Major Laurence F. Stone, Depot Commander, to Lieut.-Colonel; 1st Lieut. Oscar F. Carlson, Supply Officer, to Captain; and 2nd Lieut. John W. Egan, Chief Inspector, to 1st Lieutenant.

Effective March 19, 1935, the following-named officers of the Air Corps are assigned to duty in the Hawaiian Department and will have the temporary rank indicated:

To Captain: 1st Lieuts. Robert W. Warren and William C. Sams, both Intelligence and Operations Officers, the former with the 4th Obs. and the latter with the 50th Obs. Squadron.

To 1st Lieut.: 2nd Lieuts. Francis H. Grisvold, Supply Officer, 6th Pursuit Sqdn.; Richard S. Freeman, Armament Officer, 19th Pursuit Sqdn.; Mills S. Savage, Armament Officer, 26th Attack Sqdn., and William B. Offutt, Armament Officer, 75th Service Squadron.
-----oOo-----

Major William O. Ryan and 1st Lieut. Gordon P. Saville, Air Corps, now on duty at Maxwell Field, Ala., assigned to duty, respectively, as Director and Secretary, Air Corps Board, Maxwell Field, received temporary promotions, effective March 11, 1935, the former as Lieut.-Colonel and the latter as Captain.
-----oOo-----

Effective March 11, 1935, Major Edward L. Hoffman, Air Corps, was assigned to duty as Group Commander, 12th Observation Group, Brooks Field, Texas, this assignment carrying with it the temporary rank of Lieut.-Colonel.

WAR DEPT. ORDERS AFFECTING AIR CORPS OFFICERS

CHANGES OF STATION: To Office, Chief of the Air Corps, Washington - 1st Lieut. Lawrence J. Carr, from Bolling Field; Captain George L. Usher, from Langley Field; Captain Rowland C.W. Blessley, from Crissy Field; Major Wm.E. Lynd, from Mitchel Field; 1st Lieut. John S. Griffith, from Kelly Field.

To Randolph Field, Texas: 1st Lieut. Herbert M. Newstrom, from Crissy Field.

To Fort Bragg, N.C.: 1st Lieut. Fred A. Ingalls, from Crissy Field.

To Panama: Major Donald P. Muse, from Crissy Field.

To Farmingdale, L.I., New York, for duty as Air Corps Representative of the Seversky Aircraft Corporation: Captain John S. Gullet, from Materiel Division, Wright Field.

To Materiel Division, Wright Field, O: Capt. Harry C. Montgomery, from Selfridge Field.

To Fort Sam Houston, Texas, for duty as Control Officer, Southwestern Airways: Capt. Charles A. Pursley, from duty with Organized Reserves, Pittsburgh, Pa.

To Peoria, Ill.: for duty in connection with recruiting - Col. Theodore A. Baldwin, from duty at U.S. Disciplinary Barracks, Governors Island, N.Y.

To Randolph Field, Texas: Capt. Douglas Johnston, from Hawaiian Department.

RELIEVED FROM DETAIL TO THE AIR CORPS:

2nd Lieut. Harold C. Davall, to Hawaiian Department for assignment to duty with Infantry.

PROMOTIONS: to 1st Lieutenant: 2nd Lieuts. John N. Stone, rank Feb. 6th; Phineas K. Morrill, rank Feb. 7th; Thomas R. Lynch, rank February 11th.

ASSIGNMENTS: Lieut.-Colonel Walter H. Frank, Group Commander, 9th Bombardment Group, Mitchel Field, N.Y.; Lieut.-Colonel John H. Pirie, Group Commander, 17th Attack Group, March Field, Calif.; Captains Carlton F. Bond, Adjutant, 3rd Wing, Barksdale Field, La.; Angier H. Foster, Intelligence and Communications Officer, 3rd Wing, Barksdale Field; Malcolm N. Stewart, Intelligence and Communications Officer, 2nd Wing, Langley Field, Va.; Alfred E. Waller, Assistant Operations Officer, 2nd Wing, Langley Field, Va.

Following officers are relieved from assignment to duty as students at the Air Corps Tactical School, Maxwell Field, Ala., and will then report to the Commandant thereof for duty on the staff and faculty: Captain Byron E. Gates, 1st Lieuts. Haywood S. Hansell, Jr., Leonard H. Rodieck, John M. Weikert.

---oCo---

CHANGES AT LANGLEY FIELD

During the first week of March, Langley Field, Va., was in the process of changing from a Regular Air Corps Station to a Headquarters G.H.Q. Air Force, 2nd Wing Headquarters G.H.Q. Air Force, 8th Pursuit Group, 2nd Bombardment Group, and Station Complement. The reassignment of personnel, barracks and duties to conform to the new set-up is practically complete. General Frank M. Andrews arrived on the Post on March 1st, and General Pratt was expected on March 7th. A Wing Re-

view was scheduled for March 6th, participating units from Selfridge Field, Mitchel and Langley Field to be received by General Andrews.

---oCo---

19th WING IN REVIEW FOR SIX GENERALS

Detachments of the 19th Composite Wing, commanded by Colonel W.C. McChord, demonstrated the versatility of the Air Corps recently, when they participated on foot, in motors and in the air in a review at Fort Clayton, Canal Zone, in honor of six general officers.

The final review of all the troops in the Pacific Sector, prior to their entry into the annual department maneuvers was so timed as to coincide with the presence at the Balboa docks of the Transport REPUBLIC. Among the passengers on the Transport were Major Generals Paul B. Malone, enroute to command the 9th Corps Area; Hugh A. Drum, enroute to command the Hawaiian Department; Brigadier-Generals James A. Woodruff, enroute to command the Port of Embarkation at Fort Mason, Calif., and Edward M. Shinkle, Ordnance Department, on an inspection tour. Besides the visiting Generals in the reviewing stand were Major-General Harold B. Fiske, commanding the Panama Canal Department, and Brigadier-General John W. Gulick, commanding the Pacific Sector.

The first air unit, a provisional battalion of 480 strong, commanded by Captain W.B. Gates, marched by the reviewing stand following one of the Infantry regiments. The precision of its marching received much enthusiastic comment, despite the excellent example set by the preceding battalions.

The next Air Corps element to pass the reviewing stand was the motor column. Although the tactical transportation of the 16th Pursuit Group had been in the hands of the organization only a few weeks, drivers had been sufficiently trained so that lines and columns were well held throughout the ceremony.

The final element in the review was the 16th Pursuit Group, 44th Observation Squadron attached, Major Robert L. Walsh, commanding. The timing of the aerial pass-by was admitted by all spectators to be perfect. The Pursuit Group had remained well out of sight during the passing of the ground elements in review. Just as the last motor tractor cleared the reviewing stand, the first element of the Group arrived and passed over it.

After the review, General Gulick, the Sector Commander, issued a General Order praising the participating troops.

---oCo---

The NEWS LETTER would appreciate hearing from Kelly Field, Texas; France Field, Panama Canal Zone; Chanute Field, Rantoul, Ill.; and more frequently from Selfridge, Mitchel and Randolph Fields. Reference is made to Circular Letter No. 35-1, Office of the Chief of the Air Corps dated January 4, 1935.

---oCo---

Members of the Air Corps who possess any talent in pen and ink sketching are cordially invited to submit cover designs for the News Letter on letter size paper. Use India ink.



NEWS LETTER



ISSUED BY
THE OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON, D.C.

LETTER NEWS



THE OFFICE OF THE CHIEF OF THE AIR CORPS
WASHINGTON, D.C.

Information Division
Air Corps

April 1, 1935

Munition Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

FIELD EXERCISES OF SECOND BOMBARDMENT WING, AIR CORPS

The following extracts are taken from the report of Major B.Q. Jones, Air Corps, who commanded the 2nd Bombardment Wing (now part of the Second Wing, GHQ Air Force) on its recent maneuvers in the Fourth Corps Area:

"1. Pursuant to authority of 4th Indorsement, A.G.O., Washington, D.C., dated December 6, 1934, to the Commanding General, Third Corps Area, Baltimore, Maryland, the Second Bombardment Wing, providing its own shelter and messing facilities, engaged in field exercises in the Fourth Corps Area, first concentrating at Miami, Florida, January 11, 1935, and then engaging in combat maneuvers and concentrating in five other areas, returning to its home station February 3, 1935.

a. A detachment of the 19th Airship Squadron accompanied the Wing to Miami, Florida, returning to Langley Field from that place.

2. Strength of Units: The personnel participating in these field exercises, including 4 officers and 14 enlisted men comprising the Airship Squadron detachment, totalled 99 officers, 19 Flying Cadets and 255 enlisted men. The strength of the 2nd Bombardment Group was 45 officers, 11 Flying Cadets and 114 enlisted men, and that of the 8th Pursuit Group, 43 officers, 8 Flying Cadets and 114 enlisted men. This Group personnel, together with 4 officers and 8 enlisted men of Headquarters 2nd Bombardment Wing, 2 officers and 2 enlisted men of the Medical Corps and one officer and 3 enlisted men of the supply detachment, made up the total personnel strength as above stated.

The equipment included 29 Bombardment, 44 Pursuit and 8 Transport planes, 45 trucks and one ambulance.

3. Organization:

a. Shortage of airplanes, including transport, required the organization of the Wing into two groups of two squadrons each with motor vehicles attached for the transportation of personnel and equipment.

b. A detachment of Air Corps Station Supply accompanied the Wing as an Air Corps mobile advanced supply point. The Air Corps Supply Officer also acted as Wing contracting officer.

c. For the combat maneuvers from dispersed airdromes the command was divided into opposing Red and White Forces,

each under the command of a group commander and composed of one squadron each of Bombardment and Pursuit operating over two opposing Army fronts.

d. The Flight (of 2 elements of 3 planes each) operated as the basic tactical unit; the squadron as the basic administrative and tactical unit; the group as the basic supply, administrative and tactical unit; the wing as the major tactical command.

The Group commanders and staffs directed the tactical employment and administered to the needs of their composite groups (half Pursuit and half Bombardment) in their respective combat sectors. The Wing Commander and staff functioned as the superior headquarters in the theatre of operations.

(1) The Group Commanders and Staffs evidenced unfamiliarity in the employment of the attached Squadron of the other group. This was due to lack of training in the tactics and technique of the other class of combat aviation.

4. Operations:

a. The Wing, messing, sheltering (in tents), maintaining and supplying itself thruout the exercises, concentrated at Miami, Fla., Jan. 11, 1935, two days late due to bad weather. It dispersed for combat maneuvers to airdromes in the Tampa, Fla. area Jan. 15th, concentrated at Tampa, Fla., Jan. 17th, and performed the prescribed 20 hour maintenance inspection of equipment. It then dispersed for combat maneuvers to airdromes in the Tallahassee, Fla., area Jan. 20th; concentrated at Mobile, Ala., Jan. 23rd, where a planned 40 hour maintenance inspection could not be performed due to cold weather that forced the movement of the Wing Jan. 25th to New Orleans, where, with better hangar facilities (and moderating weather), the necessary maintenance was accomplished. From there the Wing dispersed for combat maneuvers to airdromes in the Montgomery, Ala., area Feb. 1st, from whence, time limitations required the return of the Wing to Langley Field, Feb. 3rd, omitting concentrations and maneuvers in the Atlanta area. Several demonstration side flights were made by units for outlying cities.

(1) Air temperatures from 15° to 75° were encountered. Rain and some snow were experienced only one day.

b. Sixteen independent Air Corps camps

were made; 3753 hours were flown; 3315 airmiles and 2675 air line miles were covered in Wing movements.

c. There was but one forced landing, that of a transport plane with engine trouble on the airdrome at De Funiak Springs, Florida. Several accidents occurred on the ground in landing and taxiing. * * *

d. The 19th Airship Squadron, sending forward its own mobile field mooring mast by truck to Miami, flew this TC-13 airship to Miami, remained at that place while the Wing was concentrated there, returning directly to Langley Field upon the departure of the Wing for the Tampa area.

5. Communications:

A ground radio net between the Wing and Group headquarters and between the Wing and the Air Corps net thru Maxwell Field was satisfactorily maintained by using SCR-187 sets installed in airplanes with improvised power furnished while on the ground by the unsatisfactory but only available power unit (Type P E - 41).

6. Equipment:

a. Special equipment lists for the reduced strength units were prepared and used on the exercise.

b. Absence of air transportation required extensive use of motor vehicles and the duplication of certain items of camp and mess equipment.

7. Supply: Replenishments by air transport of non-perishable rations and of the equipment and supplies (including 5 engines) were effected from stations in the rear (principally Maxwell and Langley Field). Bad weather interfered but slightly with this method of supply. Occasional isolated items, not warranting flights to distant supply points, were expressed overland. One lower P-12 wing could not be transported by air and was shipped overland.

(1) Six motors and 2 wings were changed in the field.

(2) Four airplanes were shipped by freight to Air Corps Depots for overhaul.

8. Evacuation:

Evacuation of personnel was effected by air (2 officers and 6 enlisted men were evacuated for all reasons to Army stations including points as far as Langley Field). * * *

9. Comments:

a. The principle of troop movements is the same for air as for ground troops, EXCEPT that air movements are more affected by adverse weather.

b. As was the experience in the Air Mail Operations, airplanes should be provided with, or moved to adequate hangar facilities for their proper maintenance inspections in rainy weather and when air temperatures approach or drop below freezing.

c. With proper transportation, small

strength Bombardment and Pursuit squadrons can operate indefinitely in the field from previously prepared airdromes without the assistance of service squadrons.

d. Except for lighter tent poles and pins, the present army camp and field kitchen equipment is most suitable for Air Corps field operations.

(1) Inadequate bedding caused real hardship for the men in cold weather in spite of the fact that Sibley stoves were used.

(2) Special bivouac equipment (especially unheated tents) is undesirable.

(3) The sanitary advantage of paper plates merits their consideration as a standard item.

e. For true self-sufficient Air Corps combat mobility, high speed transport planes are essential for the movement of personnel, equipment and supplies not transportable in combat planes. Transport planes must be unit equipment and actually accompany the flights of their units.

(1) A small transport (the Lockheed C-12), because of its small size and higher cruising speed, was most valuable for evacuation of personnel and the shipment of emergency items.

(2) Baggage space of 16 cu. ft. (4'x2'x2') provided in a few of the mono-coque fuselages (P-12E's) was of great value for the transportation of pilots' bedding and clothing rolls, tool kits, spare parts, supplies and field equipment.

f. Self-sufficient mobility of Air Corps Combat Units without transport planes requires duplication in essential items of camp equipment and motor vehicles.

(1) When equipped with motor vehicles, daily movement of Air Corps units is restricted to that of their motor convoys. Changes of base of Air Corps units equipped only with motor vehicle transportation can, in suitable weather, be effected up to the maximum one day's flying range of the airplane by dispatching the convoy echelon ahead in sufficient time.

(2) The $\frac{1}{2}$ ton truck proved unsuitable due to its limited carrying capacity.

(3) Eight passenger reconnaissance trucks and five 6-ton fast moving convertible passenger motor busses would prove the most suitable motor transportation for limited mobility of Air Corps troops.

(a) Two such reconnaissance trucks and four such motor busses would suffice for double echelon movement of single place Pursuit squadrons not equipped with transport planes. Two each would suffice for Bombing squadrons.

g. Maximum combat power with the greatest possible mobility, concealment and security, with ability to concentrate rapidly in critical areas, can only be obtained by the preparation and manning of numerous small dispersed flying fields equipped with concealed cover for the shelter and messing of personnel and housing of air-

planes. This could reduce combat units to combat crews, airplanes and administrative overhead, all ground personnel being provided by service squadrons. This scheme of organization and operation should be reserved for war conditions. For peace time training and field exercises it is more economical and convenient to allow combat units to be self-sufficient, including the necessary ground personnel in their tables of organization.

h. If combat mobility and rapid troop movements are not to be interfered with, combat unit transport planes should not be employed along the line of communications.

(1) The line of communications should provide its own transport planes.

i. An advanced mobile supply point for all classes of supplies should accompany each independent Headquarters in the field.

j. The 22% Pursuit squadron over-strength in spare combat planes was inadequate, while the 33-1/3% Bombardment squadron spare plane over-strength was excessive.

(1) The Bombardment planes were never subject to more than cruising and formation flying speed either in the troop movements or combat maneuvers. On the other hand the Pursuit planes, besides flying the normal cruising and formation speeds, were subjected to the severe stresses of repeated air combats and attacks at all altitudes.

(2) Spare transport planes should have been available from the rear.

k. Properly designed mobile (by air) ground radio sets and power units should be provided all squadron and higher headquarters for use in the ground radio net between dispersed airdromes.

l. Mobile (by air transport) night lighting equipment is essential for night operations.

m. Gasoline and oil should be procured in less quantities than estimated to meet requirements, with options to increase the amounts on call to 50% in excess of the estimated requirements.

(1) Small quantities in 1/2 gal. sealed tins of a special quick starting airplane gasoline should be provided for cold weather (freezing) starting of engines.

(a) As much as three hours were required under freezing conditions to get all the motors of the unit started.

(2) The establishment in the several combat areas of distributing points for airplane fuel and oil, the delivery by trucks to the several airdromes in the areas and the servicing of airplanes from 50 gal. gasoline drums and from 1 gal. sealed oil cans proved most satisfactory.

(a) The same method of distribution of all classes of supplies, not excepting ammunition and bombs, could be effectively applied.

n. The development of gun camera films in the field was unsatisfactory, due to conditions of cold and varying mineral salts in the water.

o. The march and camp discipline of the command was superior.

(1) Military camp organization and practices should be adhered to by Air Corps Units.

(2) Special per diem funds should be provided for the quartering and messing of individuals and small detachments isolated from their units by the exigencies of the operations (forced landings, repairing and caring for damaged aircraft left behind, etc.).

p. Obstructions, soft and wet surfaces (only disclosed by personal reconnaissances) prevented the use of many airdromes otherwise suitable for the dispersion of units.

q. The outstanding tactical observation of the exercises was the fear of unit commanders of air attacks against their airdromes and their desire for the dispersion and concealment of their camps and airplanes on auxiliary flying fields.

r. In view of the probable infrequent employment in Army sectors of group masses of Pursuit, Bombardment and Attack aviation and the need for the employment in those sectors of balanced combat teams of Pursuit, Bombardment, and Attack and Observation aviation, careful consideration should be given to the development and training of such teams by the organization at home stations of composite groups composed of balanced forces of the four classes of combat aviation.

(1) Group commanders, as combat leaders, should be trained in the tactical employment of all classes of aviation.

(2) Combat squadrons should be developed and trained as members of balanced combat aviation teams which, in the opinion of the undersigned and except for GHO Air Force Reserves, should consist of composite groups composed of Pursuit, Bombardment, Attack and Observation units. * * * "

---oOo---

GOOD-BYE LIBERTY ENGINES

The Materiel Division Correspondent of the News Letter, touching on the status of Liberty engines, states that instructions have been issued to depots to list on Surplus Property Disposal all V-1650 engines, spare parts, equipment, and accessories, except those obligated for school loans. Service activities, with the exception of Kelly Field, have been instructed to dispose of this property in accordance with Air Corps Circular 65-12. Kelly Field has been authorized to retain three Liberty engines and sufficient spare parts, equipment, and accessories for the maintenance of the C-10 airplane assigned to that station.

V-6752, A.C.

The Handley Page Bulletin (London, Eng.) for March, 1935, prints an interesting article on the ability of fighter "Pursuit" airplanes successfully to combat the operations of multi-engined Bombing airplanes. The article appears in English, French and Spanish, without quoting the author's name.

Two of the most interesting points brought out are: first, that the initiative lies with the Bombing airplane and, second, that unfavorable weather hampers the fighting airplane more in its effort to locate in the air its target, (the Bombing airplane) than such weather hampers the Bombing airplane in locating its target, which is usually fixed on the ground. In especially unfavorable weather, it is probable that fixed targets would always be selected.

Under the initiative which lies with the Bombers, they are able to select a time of arrival at the target most unfavorable to fighter action. In addition, they select the altitude and the route, the former of which may be altered from time to time and the latter of which may be made circuitous, in order still further to baffle efforts at interception. Due to the fact that Bomber action can be carefully predetermined, many aids can be employed in accomplishing its task, such as radio directional devices and special air navigation instruments. Due to the nature of the task confronting the fighter airplane, such aids are not applicable.

In the single-seater fighter operated by one man, it becomes necessary to place the offensive action of the fighter airplane in fixed synchronized guns, which are aimed by the pilot's action in controlling the direction of the airplane. For such a method of fire to be effective, the fighter airplane must have a considerable margin of superiority in speed and maneuverability over the target it is to attack.

Examining the conditions which prevailed in this respect in the World War, it is found, according to the article in the Bulletin, that the fighter had a margin of 50% superiority during most of the period of the World War in which combats between fighter and bombardment airplanes were common. Until recently, designers have been able to maintain the speed of the Pursuit at approximately 50% above that of Heavy Bombardment. In the last year, due to the unusually effective design of multi-engined Bombardment, taken in conjunction with ability to reduce the head resistance of the motors in comparison with their horsepower, the speed of the the Bombardment airplane has rapidly overhauled that of the Pursuit airplane.

Even though it may later be possible again to restore the approximately 50% speed superiority of the Pursuit plane, this speed will then be so great as to give rise to serious doubt of a pilot's ability successfully to perform the maneuvers and firing essential to success in the tactics of the fighter as such tactics were carried out during the World War.

While not referred to in the article, the discussion presented therein suggests that a revolution of fighter design and tactics may be the answer to the successful combating in the air of Bombardment operations. In the matter of design, this may take the form of a multi-engined fighter of somewhat similar characteristics to the Bomber and of only slightly superior speed. This type of fighter would naturally involve a superiority of fire power, perhaps both in the matter of number of guns and also a greater range for the guns. With such conditions obtaining for the fighter airplane, the tactics may then be modified to give the greatest advantage to this superior fire power. It is probable that such tactics may take the form of a "stern chase" and a "running fight" such as are employed in the tactics of naval vessels, but utilizing an added dimension.

---00---

MEXICAN FLAG PRESENTED TO KELLY FIELD

In appreciation for courtesies shown Mexican Army fliers who graduated from the Air Corps Training Center, General de Division Pablo Quinoza, Secretary of War of the Mexican Republic, presented to the Air Corps Advanced Flying School, Kelly Field, Texas, a beautiful silk Mexican flag and a carved trophy box on which the coat of arms of both nations is hand carved.

The presentation of these gifts was made to Colonel Jacob E. Fickel, Com-

mandant of the Advanced Flying School, by Lieut. Luis Noriega, who graduated from this School last October, and Lieut. Daniel Maldonado, another Mexican flier. These two fliers made a special trip from Mexico City in order to present the gifts.

The flag bears the insignia of the Mexican Air Force, and will be added to the collection which the Advanced Flying School now boasts of and which is displayed at the Aviation Club.

---00---

During February, the Engineering Dept. of the San Antonio Air Depot overhauled 20 planes and 44 engines and repaired 20 planes and 26 engines.

The crowd of 5,000 present at Kelly Field on the occasion of the recent landing of 40 new Pursuit planes of the First Wing, G.H.Q. Air Force, testified to the air-mindedness of San Antonio citizens.

TEMPORARY PROMOTIONS IN THE AIR CORPS

Effective March 15, 1935, the assignments of the following-named officers to duty in the Philippine and Panama Canal Departments were confirmed, the Chief of the Air Corps having certified that no officers of suitable permanent rank are available for these duties:

PHILIPPINE DEPARTMENT

Captain Isaiah Davies, Intelligence and Operations Officer, 4th Composite Group, was promoted to Major, and 1st Lieut. Charles W. O'Connor, Engineering Officer, Philippine Air Depot, to Captain.

Squadron Officers

Captains Martinus Stenseth, Thomas W. Hastey, and Harvey W. Prosser, commanders of the 2nd Obs., 28th Bomb. and 66th Service Squadrons, respectively, were promoted to Major.

Flight Commanders, all 1st Lieutenants, promoted to Captain, were Hugo P. Rush, George W. Mundy, Alfred R. Maxwell, 2nd Observation; William D. Old, Clinton W. Davies, Ford L. Fair, 3rd Pursuit, Charles H. Caldwell, John S. Mills, and David R. Gibbs, 28th Bombardment Squadron.

Intelligence and Operations Officers, 1st Lieut. Leon W. Johnson, 2nd Obs., and 2nd Lieut. Gerald Hoyle, 28th Bombardment Squadron, were promoted to Captain.

First Lieut. Richard D. Reeve, Supply Officer, 66th Service Squadron, promoted Captain.

Second Lieutenants promoted to 1st Lieutenant, were: Winslow C. Morse, Engineering Officer, 3rd Pursuit; Leslie O. Peterson, Armament Officer, 2nd Observation; Harold W. Bowman, Carl A. Brandt, Supply Officers, 3rd Pursuit and 28th Bombardment Squadrons, respectively; Hugh A. Parker and John H. Bundy, Communications Officers, 28th Bombardment and 3rd Pursuit Squadrons, respectively.

PANAMA CANAL DEPARTMENT

In the 6th Composite Group, Captain Willis R. Taylor, Intelligence and Operations Officer, was promoted to Major; and to the rank of Captain, 1st Lieuts. Ward J. Davies, Supply Officer, and Donald W. Benner, Engineer and Armament Officer.

In the 16th Pursuit Group, promotions were as follows: To Major: Captain Frank O'D. Hunter, Intelligence and Operations Officer - To Captain: 1st Lieuts. Robert S. Israel, Supply Officer, and Charles A. Ross, Engineer and Armament Officer - To 1st Lieut.: 2nd Lieuts. Earl W. Hockenberry, Adjutant, and Edward W. Anderson, Radio Officer.

Squadron Officers

Name and Rank	Organization	Temp. Rank
---------------	--------------	------------

Squadron Commanders

Capt. Homer B. Chandler	7th Obs. (RS)	Major
1 Lt. Dixon M. Allison	24th Pursuit	Major
Capt. Richard H. Ballard	25th Bomb.	Major
Capt. George H. Beverley	29th Pursuit	Major
Capt. Warner B. Gates	44th Obs.	Major
1 Lt. Orrin L. Grover	74th Pursuit	Major
1st Lt. Burton M. Hovey, Jr.	78th Pursuit	Major
Capt. Alonzo M. Drake	80th Service	Major

Name and Rank	Organization	Temp. Rank
<u>Intelligence and Operations Officers</u>		
1st Lt. Otto C. George	7th Obs. (RS)	Capt.
1st Lt. George H. Macnair	24th Pursuit	Capt.
1st Lt. Bernard A. Bridget	25th Bomb.	Capt.
1st Lt. Joseph H. Atkinson	29th Pursuit	Capt.
1st Lt. Guy B. Henderson	44th Obs. (RS)	Capt.
1st Lt. James W. Brown, Jr.	74th Pursuit	Capt.
1st Lt. William E. Hall	78th Pursuit	Capt.
<u>Flight Commanders</u>		
1st Lt. John F. Guillet	7th Obs. (RS)	Capt.
1st Lt. George R. Geer	7th Obs. (RS)	Capt.
1st Lt. Herbert E. Rice	24th Pursuit	Capt.
1st Lt. Melie J. Coutlee	24th Pursuit	Capt.
1st Lt. Neil B. Harding	25th Bomb.	Capt.
1st Lt. Frank H. Robinson	25th Bomb.	Capt.
1st Lt. Thayer S. Olds	29th Pursuit	Capt.
1st Lt. Samuel R. Brentnall	29th Pursuit	Capt.
1st Lt. Allen W. Reed	44th Obs. (RS)	Capt.
1st Lt. H.W. Pennington	44th Obs. (RS)	Capt.
1st Lt. Joel E. Mallory	74th Pursuit	Capt.
1st Lt. Ronald R. Walker	74th Pursuit	Capt.
1st Lt. F.A. Armstrong, Jr.	78th Pursuit	Capt.
1st Lt. David D. Graves	78th Pursuit	Capt.
<u>Supply Officers</u>		
2d Lt. Ralph F. Swofford, Jr.	24th Pursuit	1st Lt.
2d Lt. Richard J. O'Keefe	25th Bomb.	1st Lt.
2d Lt. Frank P. Hunter, Jr.	44th Obs. (RS)	1st Lt.
2d Lt. Nelson P. Jackson	74th Pursuit	1st Lt.
2d Lt. Hoyt D. Williams	78th Pursuit	1st Lt.
1st Lt. Leo W. DeRosier	80th Service	Capt.
<u>Communications Officers</u>		
2d Lt. Dwight Divine, 2d	24th Pursuit	1st Lt.
2d Lt. P. Ernest Gable	25th Bomb.	1st Lt.
2d Lt. Jacob E. Smart	44th Obs. (RS)	1st Lt.
2d Lt. Millard C. Young	74th Pursuit	1st Lt.
<u>Engineering Officers</u>		
2d Lt. Winton S. Graham	25th Bomb.	1st Lt.
2d Lt. Jarred V. Crabb	29th Pursuit	1st Lt.
1st Lt. Joseph A. Bulger	80th Service	Capt.
<u>Armament Officers</u>		
2d Lt. George F. Hartman	44th Obs. (RS)	1st Lt.
2d Lt. Lawrence B. Kelley	25th Bomb.	1st Lt.
<u>Transport Officers</u>		
2d Lt. Thomas B. Hall	80th Service	1st Lt.

Effective March 16, 1935, the following officers on duty at Air Corps schools, were assigned to duties carrying therewith advanced rank.

At the Air Corps Training Center, Randolph Field, Texas, Captain Arthur E. Easterbrook, Executive Officer, was advanced to Lieut.-Colonel; Captains Charles H. Dorman, Director of Ground Training, and John K. Cannon, Director of Flying Training, to Major.

Officers on duty with the Air Corps Primary Flying School advanced in rank were: To Lieut.-Colonel: Major Lloyd N. Keesling, Assistant Commandant - To Major: Captains Walter Miller, Executive Officer; Edward D. Jones, Engineering Officer; Leonidas L. Koontz, Supply Officer; Aubrey C. Strickland, Director of Flying Training; Clyde V. Finter, Director of Ground Training; Bob E. Nowland, Primary Stage Commander,

and Paul L. Williams, Basic Stage Commander.

Officers on duty with the Air Corps Advanced Flying School, Kelly Field, Texas, advanced in rank were: To Lieut.-Colonel: Major Harrison H.C. Richards, Assistant Commandant; To Major: Captains Lewis A. Dayton, Executive Officer; Clifford C. Nutt, Engineering Officer; Thomas L. Gilbert, Supply Officer; Robert D. Knapp, Director of Flight Training; Perry Wainer, Director of Ground Training - To Captain: 1st Lieuts. Wilfrid H. Hardy, Adjutant; Glen C. Jamison, Operations Officer; Otto P. Weyland, Secretary; Wallace E. Whitson, Chief, Bombardment Section.

Captain Myron R. Wood, Commanding the 67th Service Squadron, Randolph Field, advanced to Major.

Squadron Officers, Kelly Field, Texas:

Name and Rank	Squadron	Temp. Rank
<u>Squadron Commanders</u>		
Capt. Ulysses G. Jones	39th Obs.	Major
Capt. James A. Healy	40th Attack	Major
Capt. John A. Laird, Jr.	41st Obs.	Major
Capt. Thomas S. Voss	42nd Bomb.	Major
Capt. Louis N. Eller	43d Pursuit	Major
Capt. Roderick M. Ott	68th Service	Maj.
Capt. Louie C. Mallory	81st Service	Major
<u>Intelligence and Operations Officers</u>		
1st Lt. James B. Burwell	39th Obs.	Capt.
1st Lt. George L. Murray	41st Obs.	Capt.
1st Lt. Edgar T. Selzer	42nd Bomb.	Capt.
1st Lt. Samuel E. Anderson	43rd Pursuit	Capt.
<u>Engineering Officers</u>		
2d Lt. Anthony Q. Mustoe	39th Obs.	1 Lt.
1st Lt. Adolphus R. McCornell	68th Serv.	Capt.
1st Lt. Edward H. Underhill	81st Service	Capt.
<u>Flight Commanders</u>		
1st Lt. George A. Whatley	39th Obs. "A"	Capt.
1st Lt. Clifford P. Bradley	39th " "B"	Capt.
1st Lt. Augustine F. Shea	40th Attack	Capt.
1st Lt. James M. Fitzmaurice	40th Attack	Capt.
1st Lt. Carlisle I. Ferris	41st Obs. "A"	Capt.
1st Lt. Joseph Smith	42d Bomb. "A"	Capt.
1st Lt. George H. Steel	42d Bomb. "B"	Capt.
1st Lt. Clyde K. Rich	43d Pursuit	Capt.
1st Lt. Howard E. Engler	43d Pursuit	Capt.
<u>Armament Officers</u>		
2d Lt. Roy D. Butler	42d Bomb.	1 Lt.
2d Lt. Kenneth A. Rogers	43d Pursuit	1 Lt.
<u>Supply Officers</u>		
1st Lt. Ralph C. Rhudy	68th Service	Capt.
1st Lt. Roger J. Browne	81st Service	Capt.

AIR CORPS TECHNICAL SCHOOL, CHANUTE FIELD, ILL.

Captain Earle G. Harper, Assistant Commandant, was advanced to Lieut.-Colonel. Other officers on duty at this School advanced in rank are as follows: To Major - Captains Edwin F. Carey, Executive Officer; Samuel M. Connell, Engineering Officer; William Turnbull, Supply Officer; William A. Hayward, Director, Mechanics; Walter T. Meyer, Director, Communications; - To Captain - 1st Lieuts. Robert W. Harper, Adjutant; Herbert W. Anderson, Operations Officer, and William O. Eareckson,

Secretary.

Captains Walter K. Burgess, Commander of the 48th Pursuit Squadron, and James B. Carroll, Commander of the 98th Service Squadron, both at Chanute Field, Ill., were advanced to Major.

---oOo---

OFFICERS DETAILED TO AIR CORPS TECHNICAL SCHOOL

Special Orders of the War Department recently issued direct various Air Corps officers to pursue courses of instruction at the Air Corps Technical School at Chanute Field, Rantoul, Ill., and to report to the Commandant of that School not later than September 1, 1935, for duty as students.

The officers detailed to pursue the 1935-1936 airplane maintenance engineering-armament course are enumerated below, as follows:

Name and Rank	Present Station
1st Lt. Herbert L. Grills	Randolph Field,
1st Lt. William T. Hefley	Brooks Field
1st Lt. Carl B. McDaniel	Randolph Field
1st Lt. Eugene H. Rice	Ft. Leavenworth
2nd Lt. Carl R. Feldmann	Randolph Field
2nd Lt. Oliver S. Picher	Langley Field
2nd Lt. Clark N. Piper	Selfridge Field
2nd Lt. George F. Schlatter	Selfridge Field
2nd Lt. Daniel F. Callahan, Jr.	Chanute Field
2nd Lt. Wiley D. Ganey	Chanute Field
2nd Lt. Hilbert F. Muentner	Chanute Field
1st Lt. Joseph F. Carroll, Jr.	Hawaii

1935-1936 Communications Course

1st Lt. George F. Kinzie	Chanute Field
2nd Lt. Stuart P. Wright	Chanute Field
1st Lt. William E. Karnes	Fort Sill, Okla.
1st Lt. Frederick A. Pillet	Randolph Field
1st Lt. Edwin L. Tucker	Randolph Field
1st Lt. Louie P. Turner	Langley Field
2nd Lt. Thomas C. Darcy	Langley Field
2nd Lt. Joe W. Kelly	Selfridge Field
2nd Lt. Minthorne W. Reed	Selfridge Field
2nd Lt. Fred S. Srocks	Kelly Field
1st Lt. Richard H. Wise	Hawaii

1935-1936 Photographic Course

2nd Lieut. William M. Prince	Hawaii
1st Lt. William O. Eareckson	Chanute Field
2nd Lt. Earle T. MacArthur, Jr.	Chanute Field

Note: The officers detailed to pursue the Communications Course are directed to report to the Commandant of the Technical School not later than October 1, 1935, while those assigned to the Photographic Course will report on or about September 15, 1935.

---oOo---

First Lieuts. Narcisse L. Cote and August W. Kissner, Air Corps, on duty in the Philippine Department, were advanced to the temporary rank of Captain. The first-named officer is on duty as Supply Officer of the 4th Composite Group, and the last-named as Engineer Officer of the 66th Service Squadron. These promotions are effective March 22, 1935.

---oOo---

Air Corps officers receiving permanent promotions, with rank as of March 1, 1935, were Capt. Calvin E. Giffin to Major, 2nd Lts. George E. Price, Richard C. Lindsay to 1st Lt. Second Lts. John G. Fowler and John L. Nedwed promoted to 1st Lieut. with rank as of March 2, 1935.

THE AIR DANGER

The French publication FIGARO for February 19, 1935, publishes an interview of General Duchene, Inspector General of A.A. Defense. After commenting on aerial danger, General Duchene considers protective measures to be enforced.

"The London air pact can only provide energetic and immediate retaliation for a sudden air attack against civilian populations, whose effect would be greatly reduced by appropriate passive defense measures. France, as well as England, is under the constant menace of an attack by air.

The largest possible number of individuals should be evacuated from the dangerous zone in case of bombardment by air. Only persons necessary for national defense or for the economic life of the nation should be permitted to stay in threatened cities; no exception should be permitted in the limited number of cities to which this measure is applied. Approximately 60% of the population of these towns can be evacuated. This dispersion is a humanitarian measure - keeping a large part of the population outside of the danger zone - and will facilitate the distribution of masks and the use of shelters prepared beforehand for those who have to stay.

The enemy's effort will be brought to bear on towns where a moral result may be anticipated, but more particularly so on strategical points, to curtail the duration of the war by aiming at vital resources: depots, workshops, public administrations, financial establishments, telephone centers, electric plants, railroads, etc. Once the population has been removed, efforts will be devoted to the protection of workmen, administrative personnel, etc.

The objection of the population at parting from those left behind in the menaced zone has been expected, but cannot change the adopted policy. The same thing was done during the last war, when civil populations had to leave their homes in the zone where fighting was going on, their transportation to the rear being provided for. The population will not have to go very far: to small neighboring towns, villages and farms. The population will thus be fairly safe from bombs without being completely uprooted from its immediate interests.

The preparation for dispersion and provision for transportation will be no harder to organize than the mobilization of the army, as this is truly a civilian mobilization which will be made compulsory by law. Accommodations will be provided by requisition. The expense will be the responsibility of the Government, the same as for other war expenses; expense does not count when it is a question of the safety of

the population.

Transportation will be provided for, to avoid panic and traffic jams, and the population of Paris will be evacuated within a few days.

This enforced dispersion will be made easier by the bombardment itself: during 1914-1918, when air warfare was far from being as dangerous as it would now be, one million people voluntarily left Paris; a much larger number in face of a graver peril would certainly be willing to leave.

Efficient action on the part of the authorities will be absolutely necessary, otherwise it would degenerate in a mad flight, in riots, etc., if not properly executed. No improvisation is possible in such a matter, and advance measures must be taken."

The newspaper adds that a conspiracy of silence against the air danger would lead the nation to a disaster. Parliament will be responsible if the law on passive defense is delayed further. The preparation for protective measures would mean that 80% of the human lives endangered in certain cities could be saved, but any further delay in this organization would be a crime against the country.

"LE TEMPS" for the same day prints a long article on "Aerial Defense," referring to the session of the Chamber of Deputies, February 7th, when discussion was begun of "one of the main problems of national defense in case of war which promises to be, above all, an air war."

A report submitted by M. Guerin stresses the danger of aviation in a war to come, as it would attack objectives of all kinds (military, economic and moral) and would use any means: explosive bombs, fire bombs, and gas. Warfare which used to be limited to the zone of the armies will now extend to the entire territory. Civil populations are now familiar with this danger and protection and defensive measures must be adopted.

The High Committee for Passive Defense of the Ministry of the Interior ruled that the expense of passive defense should be borne by those benefitting by it: administrations, public services, departments, towns, private associations or individuals, the Government contributing certain sums only in exceptional cases, in the general interest of the nation or in consideration of the particular situation of those concerned.

"It is not understood why private individuals should not receive from the State the same protection against air danger as they do against land and naval dangers, in exchange for heavy taxation.

But this would swell a budget already too heavy. Municipalities' budgets, on which most of the burden would rest, are already below present requirements, and it would be useless to expect important appropriations on that side.

Other measures, less costly, are easier to enforce, but they must be coherent and efficient."

In a proposed bill for the passive defense of the territory, Article I states the compulsory character of the law, and Article II charges the Ministry of the Interior with the direction, coordination and control of its organization. The article states that "this is making a liaison agent between several departments out of a purely civil ministry. The Presidency of the Council would seem more fitted for the mission, as it is placed above the other ministries, as a sort of liaison agent, and has under it the Secretariat of National Defense. The latter is a permanent organization which could be given facilities to organize this protection, in collaboration with a large number of civil ministries.

Representatives of the services concerned could sit on a permanent Executive Committee (war, air, navy, public works, interior, finance, public health, etc.). Regulations drafted by this committee would be transmitted to a secretary general who would inform civil and military authorities, and de-

partmental and local committees on passive defense, under the supervision of the Inspector General for A.A. Defense.

It would be the duty of that Committee to decide on pertinent measures (which, of course, are mentioned in the proposed bill on passive defense, but which, as many others, may never be enforced), and to control their execution as concerns the installations in cities, industrial establishments, the evacuation of menaced communities, the dispersion of the population, the protection of existing buildings or buildings to be constructed against fire, gas, and explosions caused by air bombs, etc.

It is impossible to rebuild cities like Paris or Lyons, taking into account the danger from the air. Protection measures imposed on new settlements will only cover a fraction of the danger. The immediate effort for passive defense must be brought to bear on cheap but efficient administrative measures, stressing above all decentralization, in an emergency, of towns essential to national defense, like the capital or certain large industrial centers. It is through a minute preparation of dispersion measures in time of peace that civil populations may be protected and also through international air pacts, or the menace of merciless retaliation."

---oOo---

SUCCESSFUL FLIGHT OF THE 17TH ATTACK GROUP

The 17th Attack Group, commanded by Captain Ira C. Eaker, Air Corps, recently returned to its home station, March Field, Calif., following an extended flight to Maxwell Field, Ala. Formerly a Pursuit organization, the 17th was redesignated as an Attack outfit when the GHQ Air Force was established.

The 17th is utilizing the Pursuit airplane, type P-26A, but it has been stated that ultimately it will be equipped with the new Northrup Attack plane when a sufficient quantity of them will have been completed by the manufacturer.

Absent from its home station for eight days, the Group made overnight stops at Dallas, Maxwell Field, and Tucson, Ariz. and remained two nights both at Barksdale and Kelly Fields.

The flight proved very instructive in several particulars. The first day's trip was effected in flying time ranging from 6½ to 6¾ hours, or an elapsed time of approximately 8½ hours per squadron. This showed an average speed for the P-26A planes in excess of 220 miles per hour. The servicing of planes required from 45 minutes to an hour per squadron at each stop, which figure should be bettered through more adequate servicing facilities. The airdromes them-

selves were found to be entirely suitable for the mass movement of fast planes.

Experience in flying in various kinds of weather was also gained. The first day found the Group negotiating a sand storm from Lordsburg, N.M. to Fort Worth, Texas, this storm having grounded many aircraft along the route. A Norther blew in at Dallas and with it a slight snowfall and rain. Cold weather flying was encountered, and heavy rains and low clouds, reducing the visibility practically to zero, were penetrated between Dallas and Montgomery. Bad weather delayed the return at San Antonio and the Group was forced to remain overnight at Tucson.

The results of the flight are considered highly successful. The trip was completed in a minimum of time. No difficulties were experienced by the personnel, and the aircraft functioned excellently. No delay greater than 15 minutes was met for any reason other than weather.

Engineering maintenance, other than the usual checks, was limited to two flat tires and the changing of a few sets of plugs. Radio communication was excellent except radio transmission to Department of Commerce stations. Two squadrons failed to make contact, but the third, through the use of a special improvised loading

coil in the antenna system was able to work stations up to about 100 miles.

---oOo---

LANGLEY FIELD UNDER GHQ AIR FORCE SET UP

Langley Field is functioning under the GHQ set up. Transfers and shifts, organizational and in living quarters, have been accomplished, and the new machine is functioning smoothly and efficiently.

Brigadier-General Henry C. Pratt, in command of the 2nd Wing, has also assumed the duties of Post Commander. His Wing Staff includes Lt.-Col. Willis H. Hale, Executive and Operations Officer; Major Walter Reid, Supply Officer; Captain Malcolm Stewart, Communications Officer; 1st Lieut. D.B. Schanep, Assistant Operations Officer, and 1st Lt. Hoyt Prindle, Adjutant. His Post Staff includes Colonel Charles H. Danforth, Station Complement Commander; Captain A.M. Guidera, Executive Officer; Capt. Paul Mathis, Adjutant; Captain James T. Hutchison, Engineering Officer; Captain H.A. McGinnis, Supply Officer; 1st Lt. R.E. Nugent, Operations Officer; 1st Lt. U.G. Ent, Meteorological Officer; 1st Lt. Edward A. Hillery, Signal Officer, and Captain H.H. Reilly, Air Corps Inspector.

Major C.B. Oldfield, who recently arrived at Langley Field, was assigned as Commanding Officer of the 2nd Bombardment Group.

---oOo---

INSTRUMENT FLYING IN HAWAII

Of late, the 50th Observation Squadron has been experimenting with formations in which the leader flies under the hood. The need for leaders who can fly by instruments alone at the head of formations has been demonstrated in the Hawaiian Islands several times, when formations have been caught in bad weather. The uses to which this ability can be put in time of war are evident. Thus far, formations of six ships have been flown with no great difficulty, but only 3-ship formations have been taken into heavy clouds. Six and nine ships will follow shortly.

---oOo---

WHEELER FIELD FIGURES PROMINENTLY IN TRANS-PACIFIC FLIGHT PROJECTS

Looking back to the several flight projects in recent months with the Hawaiian Islands as the objective, the News Letter Correspondent from Wheeler Field, T.H., states:

"Situated as we are - well inland, with an airdrome of exceptional dimensions, we seem to have become an important spot in the eyes of Trans-Pacific

flight projects. On October 29, 1934, Sir Charles Kingsforth-Smith, pilot, with Captain P.G. Taylor, navigator, arrived in the 'Lady Southern Cross' after an exceptionally well conducted flight from Australia. Following a few days repairing and checking of equipment, the flight was successfully completed to Los Angeles, via Oakland.

Our next excitement was the painstaking search of early December for Captain Charles Ulm, and his crew of co-pilot and navigator, who ran out of fuel and were lost at sea in an endeavor to reach Oahu and Wheeler Field from Oakland, Calif. Everything that was humanly possible to do was done to locate the sinking ship, and only after a period of ten days was the search abandoned.

Our next event was the flight of Miss Amelia Earhart. Shipping her Lockheed Vega from California, via commercial liner, it was set up, auxiliary tanks installed, and a successful full load test accomplished at Wheeler Field. So, without warning, late on the afternoon of Friday, January 11, 1935, Miss Earhart waved good-bye to the ground crew and took off to the east. Next morning we received word of her successful landing at Oakland. A very strenuous flight well executed.

Returning again to the 'Lady Southern Cross' and Captain Taylor, navigator, the pilots of Wheeler Field displayed no little interest in his method of navigation. The Captain gladly obliged, and during his few idle moments gave us some very instructive talks on the long night flight and his managing to keep his snip on the course with weather conditions as a whole not entirely satisfactory."

---oOo---

WINTER FLYING CLOTHES USED IN HAWAII

The 18th Pursuit Group at Wheeler Field, T.H., has been conducting an interesting series of tactical problems of late with reference to Pursuit versus Attack missions. The Correspondent states that while the flying equipment is not up-to-date and insufficient in number properly to train the individual pilots, it is felt nevertheless that much was gained in the knowledge of this phase of attack and defense.

Pursuit units equipped with liquid oxygen have stepped up to a high altitude, and winter flying clothing has become a familiar sight in this semi-tropical area.

---oOo---

The 96th Bombardment Squadron, Langley Field, Va., recently completed a Bombardment Defense problem and test, using .30 caliber guns on towed targets directly above a formation. Approximately 12,000 rounds of ammunition were used.

V-6752, A.C.

INDUSTRIAL WAR PLANS ACTIVITIES
By the Materiel Division Correspondent

Many Air Corps personnel are unfamiliar with the activities of the Industrial War Plans Section of the Materiel Division, Wright Field, Ohio. This Section is charged with making plans for the assurance of an adequate supply of Air Corps Materiel in time of emergency. This work is carried on under the direct supervision of the Office, Assistant Secretary of War, through the Chief of the Air Corps, and is now in the thirteenth year of its existence. This office has under its jurisdiction six Air Corps Procurement Districts, located at New York City; Buffalo, N.Y.; Cleveland (now at Wright Field), Ohio; Detroit, Mich.; Chicago, Ill., and San Francisco, Calif. The officers in charge of these districts are known as Procurement Planning Representatives.

Procurement Plans

Plans for the procurement of basic items, such as airplanes, engines, their component parts and accessories, aerial cameras, special trucks and winches, lighter-than-air equipment, etc., have been made for practically all standard types now in existence. These plans contain detailed information regarding the item under discussion, the number required, the sources selected as most suitable to manufacture the article in the quantities required, a statement from each of the selected sources as to the rate of production possible and the percentage of the plant capacity that will be utilized in attaining this production, the estimated unit cost and the cumulative cost for the entire program covering periods of twelve and twenty-four months' requirements, transportation problems involved, and a discussion of any difficulties that might be encountered in the emergency production of the article. These plans are revised every three years, or more often as necessary. When a new type is adopted, it is usually necessary to write an entirely new plan, as the manufacturing phases involved are, in most cases, at variance with those of the former type. The statement from the producer as to his ability to manufacture the item is supported by a factory plan, which is prepared by the Procurement Planning Representative or his civilian assistant, with the aid of the producer, or by the producer himself. One Company has employed an engineer for the sole purpose of preparing factory plans of its plants and subsidiaries.

Contributory Items

With the plans for the procurement of the basic items progressing satisfactorily, attention is now being given to plans for contributory items and materials which it is assumed might be difficult to procure in the time and quantity

required. Many raw materials enter into this class, as well as aircraft hardware, cable and tie rods, valves, springs, crankshafts, machine tools, etc. Plans for permanent mold pistons, tie rods, cordage, engine valves, and valve springs have already been submitted for the approval of the Office, Assistant Secretary of War.

Procurement Plans in Emergency

An activity of the Industrial War Plans Section, equal in importance to the preparation of procurement plans discussed in the foregoing, is the selection and training of Reserve Officers necessary to the proper functioning of the emergency procurement organization.

Organization charts have been made for the Procurement Section, Wright Field, and each of the six Air Corps Procurement Districts, as well as provision for a liaison office in Birmingham, Ala. A study has been prepared outlining the duties of each of the positions shown on these charts, the rank of the officer to fill the position, and the job specifications which the officer must meet before he can be assigned to the position.

Using these data as a basis, applications for appointment or transfer are carefully scrutinized, and, although the applicant may be of high standing in his profession, the appointment or transfer is not recommended unless he fits a certain definite position in the organization. It might here be mentioned that appointments in the Specialist Section, the source of appointment for officers for procurement duty, have been suspended by the War Department for some time past. It is not known when the suspension will be removed, but it is hoped that it will be soon, as the Air Corps now has less than the 60% allotment of officers authorized for peace time by the War Department.

The emergency procurement organization calls for a total of 452 Reserve Officers of which 271 (60%) are to be selected and trained during peace time. Until May, 1934, the organization was considerably over strength and it was necessary to eliminate such personnel as were making no attempt to secure training or fit themselves for their emergency assignments. Practically all the Air Corps Reserve Officers who held a pilot's rating were transferred to Corps Area Assignment to bring the number within the allotment for the peace time organization. Such officers as have not qualified for active reappointment, by taking the prescribed active duty training or correspondence courses, are reappointed with restriction upon completion of their five-year terms and are carried in a separate classification, unassigned, in the Office Chief of the Air Corps.

There are at present 242 Reserve officers assigned to this Section who receive training to fit them for the duties they would be called upon to perform in time of emergency. Those officers not in Government service, as

civilian employees, are entitled to two tours of active duty during their five-year period of appointment in the Reserve.

---oOo---

AIR SURVEY OF GUATEMALAN - HONDURAN - EL SALVADOR BOUNDARY LINE

Captain Willis R. Taylor, Air Corps, of France Field, Panama Canal Zone, has just completed an aerial survey of the Guatemalan-Honduran-El Salvador boundary line which again demonstrates the value and importance of aerial surveys over terrain which is difficult, if not impossible, to reach by surface transportation. In his work Captain Taylor was assisted by Technical Sergeant George W. Edwards, of the 12th Photo Section, France Field.

The following are interesting extracts of Captain Taylor's report to Colonel William C. McChord, Commanding Officer, 19th Composite Wing:

"The undersigned left France Field, C.Z., January 19, 1935, and was away from France Field twenty-nine and one-half days. Approximately 2550 square miles of territory was photographed at a cost of one dollar and fifty-two cents per square mile. The maps extant of the countries involved were all very poor and in many cases not correct. Three days were spent in checking the existing maps and the territory to be mapped, and a decision was finally made to arbitrarily establish a visual base line between an extinct volcano on one end, known as Chingo, and a fair size lake on the other end known as Guija, this on the Guatemalan-El Salvador boundary. Parallel strips were then flown to this line with the help of the compass and previous experience. Nine 65-mile strips were flown on this area and fortunately when the check was made only a few photographs had to be reflow

to cover misses. The "B" and "C" areas cover territory on the Guatemalan-Honduran line and a similar plan was used by establishing a visual base line between two mountain peaks, known as Monte Cristo and Caya Guanaca. Approximate variation in elevation on all the areas was about 6000 feet, and in some cases almost 6000 feet variation in single photographs.

At the beginning of the project control markers which show in the photographs were laid out in various points in the mountains. These were made out of muslin cloth. About two days after these were laid out the Indians had stolen all the cloth. On one occasion the marker was put on Chingo Mountain and I photographed it from 13,000 feet. After photographing some other markers I came back at a low altitude over Chingo Mountain and saw the Indians taking up the marker. Some of the engineers told me toward the latter part of the job that they had seen a number of the Indians with new shirts that had the appearance of the material making up the markers. I have had some 12 years experience on photographic mapping and I believe that was the most difficult job I have had to do. This was due to existing maps which were more confusing than helpful. The country itself was also some of the wildest I have ever flown over from the viewpoint of getting anywhere on a forced landing."

Not only was Capt. Taylor extremely busy on his flying and laboratory work, but it was necessary for him to make official calls on dignitaries of five different countries he visited, El Salvador, Guatemala, Honduras, Nicaragua, Costa Rica.

---oOo---

PREPARATIONS FOR STRATOSPHERE FLIGHT

The Scott Field Air Depot, under the direction of the Materiel Division, Wright Field, has been busily engaged in the reconditioning of 1900 helium cylinders and valves for use in the proposed stratosphere flight project being sponsored by the U.S. Army Air Corps and the National Geographic Society. This flight is scheduled for early summer. The above cylinders will probably be forwarded to the U.S. Helium Production Plant, Soncy, Texas, for filling in order to obtain dry gas of maximum purity.

REMOVAL OF AIRSHIP HANGARS

A project of considerable interest to Lighter-than-Air activities is the recent removal of two airship hangars from Ross Field, Arcadia, Calif., and their erection - one at Fort Sill, Okla., and the other at Fort Bragg, N.C. These hangars will be utilized by the First and Second Balloon Squadrons, respectively. This project is being accomplished with P.W.A. funds and will provide suitable Lighter-than-Air storage facilities at the two stations above named when the erection of the hangars is completed.

INCIDENTS IN THE COLD WEATHER TEST FLIGHT

When the Provisional Winter Test Group was forced to land at Sheboygan County Airport, Mich., on February 2nd, due to heavy fog and storms over the Straits of Mackinac, it proved to be a very fortunate occurrence for one Mr. Cocokis, a fisherman of that section, who had been marooned on Big Beaver Island, which lies approximately 12 miles off shore in Lake Michigan, west of the Straits of Mackinac.

A call was received from the State Department, State of Michigan, requesting that an airplane be dispatched to rescue this man. Lieut. Ott, flying an C-43 airplane, departed from the airport at 2:20 p.m. and, after locating Big Beaver Island and effecting the rescue, returned to the airport at 3:45 p.m.

The Provisional Winter Test Group had arrived at Duluth, Minn., February 9th. On the following day, at about 12:10 p.m., Captain Calvin E. Giffin, Operations Officer for the flight, received a telephone call at his hotel from the Commanding General, 7th Corps Area, requesting that an airplane be dispatched to Ely, Minn., to convey an oxygen tent and two tanks of oxygen to that point. This oxygen was absolutely necessary in order to save the life of a CCC worker who was dangerously low due to double pneumonia. Captain Giffin and Lieut. Walsh proceeded to the harbor where the airplanes were parked on the ice and ordered that an Observation airplane and a Bomber be warmed up. The Observation crew managed to get their airplane started almost immediately so that it was not

necessary to start the Bomber, but it was started and stood by until the C-43 took off. The two oxygen tanks, weighing approximately 125 pounds each, and the oxygen tent which weighed some forty pounds, were delivered to the airplane from the hospital and, after stowing the equipment, Captain Giffin departed at 1:25 p.m. During the trip to Ely, Capt. Giffin was forced to fly at less than 100 feet in order even to see the railroad which he was following due to the exceptionally poor visibility and snow squalls. At one point on the trip out, Captain Giffin passed through a canyon, and on the return trip passed through the same canyon but during a period of somewhat better visibility. He discovered that he had no more than five or six feet to spare on either side.

The oxygen equipment arrived at Ely in time to save the life of this CCC lad, and later in the evening, when the oxygen took effect and it was definitely known that the lad was past the crisis, Lieut.-Colonel Royce received the following telegram from the Commanding General, Seventh Corps Area:

"Re Giffin Mercy Flight to Ely
Commanding Officer desires to express sincere appreciation signed Erikson."

No trains were available, nor could any bus or automobile transportation, even if available, have reached the Hospital at Ely, Minnesota, in time to have been of any assistance in this emergency.

A chronology of errands of mercy performed by Army airmen would prove very interesting reading.

---oOo---

55TH PURSUIT COMPLETES GUNNERY PRACTICE

The 55th Pursuit Squadron, Barksdale Field, La., recently returned from Chapman Field, Miami, Fla., and reported the situation well in hand. From available authority it seems that tow target scores averaged about 60 or 70 on each phase. High score during the session was made by 2nd Lieut. J.W. Hinton, Air Reserve, with a mark of 114½. High score for record was made by 2nd Lieut. William Eades, Air Reserve, with a mark of 102. The new high speed tow targets were used in the latter part of the firing, but scores were not quite as high on these targets as on the old. However, they are more accommodating to the speed of the P-26A, and that is a help to the towing pilot.

---oOo---

Plans for the reorganization of Hamilton Field units, which include the formation of a Station Complement and the 69th Service Squadron, are complete.

-142-

SPLNDID SPIRIT AT KELLY FIELD

Kelly Field is a good place to be according to Colonel Jacob E. Fickel, Air Corps, who assumed command of the post on March 1st. To quote from Colonel Fickel: "I find a splendid spirit on the part of both officers and men and that is what counts. Colonel Clagett left things running perfectly, and he is to be congratulated on the condition of Kelly Field in all respects."

The new Commandant has been very busy, what with all the changes in squadron personnel, stormy weather, and becoming acquainted with his subordinates.

---oOo---

Effective March 1st, the various organizations at Kelly Field were re-designated, as follows:

The Hqrs. A.C.A.F.S. into A.C.A.F.S. Detachment. The five School Squadrons, 39th, 40th, 41st, 42nd and 43rd, became the 39th and 41st Observation, 40th Attack, 42nd Bombardment and 43rd Pursuit. V-6752, A.C.

Engineering News

Overcoming Destructive Torsional Vibration.

Within the last year, the question of destructive torsional vibrations set up by certain propeller-crankshaft combinations in radial, air-cooled engines has gained marked prominence in the activities of the Engineering Section. The diagnosis and solution of this problem is being speeded up considerably by the aid of special instruments developed at the Division for recording torsional vibrations. These torsional vibrations appear to a destructive extent only at certain so-called critical engine speeds and at the present time instructions to the service have specified that operating personnel avoid these critical speeds. It is, of course, realized that this procedure imposes a very definite and undesirable limitation on the usefulness of airplanes in which these engines are installed. Several changes in engines, designed to overcome this condition, are being investigated at the Division. One is a simple vibration dampening mechanism which it appears will reduce the amplitude of the torsional vibration to a value which is within safe limits. The other arrangements under consideration will change the critical speed to one which is outside the usual operating speeds of the engine. It is believed that a satisfactory solution of this problem will soon be completed. Unfortunately, however, until tests can be completed and the proper modifications incorporated in the affected engines, the present operating instructions will have to be observed in the interests of safety.

100 Octane Fuel Scores in Race.

The speed obtained in the recent Mitchel Trophy Race in which the winning P-26A airplane averaged 216.8 miles per hour around a 30-mile closed course at low altitude has probably puzzled Air Corps personnel. As this speed is in excess of the original performance test figure of 211 m.p.h. for straightaway high speed at sea level, it might appear that the engines had been abused by improper handling during the race. Such was not the case, however. The high power obtained was made possible by the use of 100 octane fuel, a new gasoline which permits engine operation at much higher output. The im-

proved anti-knock characteristics of the fuel permit increases in power output as high as 30% in some cases, without exceeding the allowable cylinder head temperatures. In addition, this improvement is obtained with a reduction in the lead content and consequent reduction in engine corrosion. The specification for this fuel reduces by half the permissible tetraethyl lead content formerly allowed.

A quantity of this fuel is being obtained for service test in tactical organizations, and it is hoped that regular procurement for service use can be initiated within six months.

EQUIPMENT ACTIVITIES

Shutter Control for T-3A (5-lens) Camera

Satisfactory experimental tests have been completed on an electrical shutter control assembly for the Type T-3A Camera. The greatest difficulty that has been experienced in the past with the T-3A camera has been the failure of the shutters when the camera was operated in sub-zero temperatures. During the past year, the manufacturer of the Type T-3A camera has undertaken the development work to overcome this shutter failure, and, after several experimental models, an electrical surge has been perfected, which stores up electrical energy prior to furnishing it to each shutter which has been redesigned to incorporate an electromagnet that operates the shutters simultaneously. Tests have been conducted at the Materiel Division and no shutter failures have occurred on any of three missions that were flown at altitudes above 23,000 feet, where the temperature varied from -30° to -40° C.

As soon as funds become available, this shutter control apparatus will be procured and service tests conducted at various Air Corps activities to determine its suitability for use on the 5-lens (T-3A) camera.

De-Icers.

Two representatives of the Materiel Division recently visited the B.F. Goodrich Rubber Company, Akron, Ohio, for the purpose of investigating latest developments in de-icer equipment. Tests were witnessed of a section of wing with electrically heated leading edge, mounted in the throat of their wind tunnel in which

moist air is circulated. The wind tunnel is housed in a cold room where a temperature of -10° F. is maintained and an air velocity of 80 m.p.h. A very interesting demonstration was given of the amount of ice that will form on the leading edge of the wing and the amount of electric energy required per sq. ft. of leading edge cover to prevent ice formation.

The results obtained from these tests indicated that the use of heat obtained from the conversion of electrical energy for de-icing purposes is impractical.

Combination Direct Cranking and Inertia Starter.

An experimental combination direct cranking and inertia starter was submitted to the Materiel Division by the Eclipse Aviation Corporation, East Orange, N.J., for test. The starter is designed to combine the advantages of both direct and inertia cranking, by simultaneously energizing the inertia flywheel as it runs free, and cranking the engine slowly (30 r.p.m.). The inertia in the flywheel can then be used to turn the engine over from that point, making a total r.p.m. of approximately 140.

Gasoline Engine Starter.

An experimental starter, manufactured by the Eclipse Aviation Corporation, East Orange, N.J., incorporating the use of a single cylinder gasoline engine to drive the reduction gears, is being tested at the Materiel Division, with a view to cranking the engine at a steady cranking speed of approximately 60 r.p.m.

ARMAMENT ACTIVITIES

Firing Tests with Adapter Assembly.

Development of an adapter assembly, intended for use in mounting the caliber .50 Browning machine gun flexibly, has advanced to the point where actual firing tests have been conducted with an experimental unit. These tests were attended with highly satisfactory results. The adapter is equipped with recoil and counter recoil springs which allow approximately $\frac{3}{8}$ -inch rearward movement of the gun in the absorption of recoil load. This adapter is intended for use in the floor position of bombardment type airplanes to furnish protection through a rear cone of approximately 45 degrees.

Gun Carriage Development.

Development work is being continued in an effort to obtain a gun carriage which can be used satisfactorily in flexibly mounting two caliber .30 Browning machine guns. Since the establishment of this requirement, which applies to rear cockpits in observation,

attack and bombardment airplanes, extreme difficulties have been experienced in obtaining an assembly which could be maneuvered under conditions of high slipstream with a reasonable amount of effort and in obtaining an efficient feeding mechanism or ammunition box arrangement. Experimental tests on a number of types have resulted unsatisfactorily. Efforts in this connection are being continued.

MATERIALS BRANCH ACTIVITIES

Fire Hazard with Ethylized Gasoline.

The fire hazard from sparks and hot scale blown from the exhaust stacks increased with the use of ethylized gasoline. The first development to counteract this effect was a fireproof enamel which could be applied over doped surfaces. This has been quite satisfactory in preventing fires but is not so durable as the dope without enamel.

New Nitrate Dope

A new type of nitrate dope pigmented with cadmium sulphide, which can be applied in the same manner as the standard semi-pigmented dope, has been developed and six observation types were refinished at Fairfield Air Depot. If the service tests are satisfactory, the fireproofing of airplane fabric will be simplified.

Higher Strength Duralumin

The aluminum alloys used in the B-10 and B-12 airplanes, and all airplanes purchased on the 1935 contracts, will be of the type commercially known as 24S, Air Corps Specification #11066. This material has 15% greater strength than the duralumin formerly used and equal corrosion resistance. It is an alloy which can be hardened by heat treatment, but the temperature of the treatment is lower than for duralumin. When this alloy is heated to the temperature now used for duralumin it becomes unfit for service.

New Static Test Building

The new static test laboratory building arrived at a further stage of completion recently when the two big traveling cranes of 5 and 15 tons capacity were put in commission. These cranes have already demonstrated their usefulness by moving an entire static test set-up, steel scaffolding and all, and by picking up the new YOA-5 Douglas amphibian for functional test of the landing gear. Each of the above operations, carried out in a very few minutes, not only saved many man hours of work but made the operations safe and workmanlike.

— 000 —

ANNUAL MANEUVERS IN THE PHILIPPINES

The annual maneuvers of the 4th Composite Group, Air Corps, under command of Lieut.-Col. A.L. Sneed, Air Corps, were held at Del Monte, Bukidnon, Mindanao, from January 14th to 26th, inclusive, 32 Air Corps officers, one Medical officer, one Reserve, one Naval officer and 104 enlisted men participating. Two officers, 70 enlisted men and all supplies were transported on the Army Mine Planter COL. GEO. F.E. HARRISON. The remaining personnel made the trip to Del Monte, 500 miles distant, by air. The return trip to Nichols Field was accomplished in the same manner.

The maneuvers served to acquaint all pilots intimately with the Island of Mindanao, its landing fields, and the general conditions to be expected there. A further benefit was to indicate to the civilian populace and the Constabulary the value of the work performed by them on landing fields, and the necessity for the requirements to which they were laid out.

Landings were made by practically all pilots on 19 different fields which may be considered satisfactory for operations of units from a flight in some cases to the entire group in others. Pilots who have previously served in the Philippines will appreciate that considerable field development work has been and is being done on the Island of Mindanao.

The average time per pilot for the maneuver period ran close to 40 hours, no accident or serious maintenance trouble being encountered.

The base at Del Monte was very satisfactory and could be used for any length of time by a group more modernly equipped than the 4th is at present. The landing area is part of the golf course belonging to the Philippine Packing Co., a Del Monte of California subsidiary. It is on a plateau-like shelf, 1800 feet above sea level, about 15 miles directly south of Cagayan, Oriental Misamis. In this locality the pineapples grow so big that the company had to dwarf the stock in order to use the conventional size can. Truck loads of corn (on the cob) and pineapples were delivered to the mess almost daily and always "gratis."

On the staff of the Group Commander were Major Louis M. Field, Flight Surgeon; Captains Isaiah Davies, Operations; Harvey W. Prosser, Engineering; Harold R. Rivers, Supply and Camp Commander, and 2nd Lieut. C.H. Caldwell, Adjutant. Capt. Martinus Stenseth commanded the 2nd Observation and Capt. L.L. Beery, the 28th Bombardment Squadron. Capt. Thomas W. Haste, Commanding Nichols Field, attended the Maneuvers attached to the 28th Bombardment.

The Department Commander, Major-General Frank Parker, spent three days

in camp with the Group, during which time he conducted his annual tactical inspection.

One of the most interesting trips during the Maneuvers was to the Cotogato Province, where General Parker and the entire Group attended a Moro wedding at the home of Datu Paglas Ibrahim near Buluan. Gifts, some of them very old and rare, were presented to each officer present. Also, there were dances by comely maidens to music from Ah Gongs. Even the palm trees seemed to have rhythm.

Upon return to Nichols Field the Bombers, as cargo planes for any and all, were loaded with bolos, spears, shields, bows and arrows, blow guns, betel nut boxes, native hats and curios of Moroland.

---oOo---

74TH PURSUIT WINS CANAL ZONE COMPETITION

Major-General Harold B. Fiske, commanding the Panama Canal Department, announced that the 74th Pursuit Squadron of Albrook Field, Canal Zone, is the 1935 winner of the Department Commander's Trophy, annually awarded the "best Air Corps Squadron" in the Department.

In his letter announcing the award, General Fiske said:

"I congratulate the officers and men of the 74th Pursuit Squadron, particularly as the competition offered by the competing squadrons was very keen. I wish also to commend the officers and men of the 25th Bombardment Squadron upon their excellent showing."

Colonel W.C. McChord, commanding the 19th Composite Wing, was the Judge of all phases of the competition except athletics and administration, both of which were handled by the Department Inspector General, Major R.N. Perley. The competition, with the maximum possible score for each phase, was as follows:

Inspection and Close Order Drill - 100 points.

Establishment of a bivouac camp, including the cooking of one meal - 100 points.

Technical condition of airplanes and hangars - 100 points.

Administration - 100 points.

Under the heading of athletics, 25 points were awarded each squadron winning a post baseball or basketball championship. The competing squadrons were the 44th Observation, the 24th, 29th, 78th and 74th Pursuit Squadrons, of Albrook Field, and the 7th and 25th Bombardment Squadrons stationed at France Field.

The winning squadron is commanded by Orrin L. Grover, 1st Lieut. at the time of the competition, but now having the temporary rank of Major, Air Corps.

FUNCTIONS OF NATIONAL GUARD AVIATION

The 41st Division Aviation, Washington National Guard, is aiming to be included as a definite working unit in all problems and tactical maneuvers at the 41st Division National Guard Camp at Camp Murray and Fort Lewis, Wash.

This year is the first time in the history of the Division Aviation that it has had an opportunity to function with a Division camp composed of National Guard troops from Montana, Idaho, Oregon and Washington. Division Aviation regards the coming camp as an excellent opportunity for training of the nature that would become a reality in case of a national emergency.

Not since the formation of the Division Aviation has the organization had the Division Air Officer, to which it is entitled, on the staff of Adjutant General White, of Oregon, also the Division Commander.

In requesting a Division Air Officer at Headquarters, Major Robin A. Day, Instructor and Commanding the 116th Observation Squadron, has the enthusiastic support of the squadron officers, who firmly believe much general good will result to all arms of the service by the presence of an Air Officer on General White's Staff.

It is the desire of the squadron officers that Captain Gardner, Regular Air Corps officer attached as Instructor to the Reserve Aviation at Boeing Field, Seattle, be made Division Air Officer for the camp period.

As the training schedule for the camp appears at this time, the Washington National Guard airmen believe they will be "mere messengers of the air" for catalogued missions long planned not to upset the opposing ground forces. Such a program is regarded as insufficient understanding on the part of plans and training officers as to how aviation can be used to advantage by all arms of the service. This understanding, the airmen contend, will be greatly corrected by the advice of an Air Corps officer on the Division staff and will result in greater effective use of aviation in all future camp maneuvers.

---oOo---

HOW FLYING HOURS ARE ACCUMULATED

To answer a query by the Arkansas National Guard Aviation as to how similar organizations roll up hours on tactical missions, the 41st Division Aviation, Washington National Guard, calls attention to various types of tactical missions carried on regularly with ground troops.

Radio, telephone and panel missions are carried on weekly with some of the following organizations: Fourth In-

fantry Regiment, Fort George Wright; 161st National Guard Infantry, Spokane; 148th Field Artillery, Idaho National Guard, Coeur d'Alene; 248th Field Artillery, Washington National Guard, Olympia; 249th Field Artillery, Oregon National Guard, Salem, Oregon.

A great deal of flying is done on the beam, and many radio missions are completed with the Division Aviation groups station. Panel work is given much consideration. One of the most popular tactical missions is all types of photographic work, especially with the camera gun.

---oOo---

SALESMAN IS SOLD ON INSTRUMENT FLYING

Experience makes salesmen, even for instrument flying. In this particular instance the new instrument flying salesman was already a salesman for a certain brand of underwear.

Major Robin A. Day, Commander of the 116th Observation Squadron, Washington National Guard, is an instrument flying enthusiast, "because it is certain to pull you out of a jam sooner or later."

Pilots of the Squadron have believed him, and worked hard under the hood. But Captain William Foster, the underwear salesman, found out that under the hood and "being right in it" is just as different as day and night.

On a weather-threatening flight between Seattle and Tacoma, after having safely crossed the Cascades from Spokane, Capt. Foster encountered a rather innocent-looking storm cloud. He wasn't hunting for trouble, so swung around the cloud, with the exception of one little tip through which he expected to pass in a minute or two. Minutes, however, seemingly turned into hours. All became black inside, and soon the driving sleet formed a deep thickness of ice on the wind shield of the O-38E. With his radio on the Tacoma beam, the Captain went forward, thinking "we'll soon be through this."

His eyes were glued on the bank and turn indicator, altimeter and air speed indicator. There was no time to look across the instrument board at the artificial horizon. The ice formation grew thicker as he next attempted to come out on top. It was then that he requested over the interphone that the radio be switched to the Seattle beam. No sooner had this been accomplished than the SC-134 went out.

Then started the spiral downward from 3700 feet altitude. When the ground came to view the airplane was at an altitude of only about 200 feet.

"The Major is right," came a satisfied voice over the interphone to the observer, "instrument flying will pull you out of a jam sooner or later."

Capt. Foster has added instrument flying to his underwear salesmanship.

In a speech in the House of Representatives on March 22nd, the Hon. John J. McSwain, Chairman of the House Military Affairs Committee, expressed his belief that most forward-looking, disinterested students of national defense for the United States now regard aircraft as "the first line of defense." He then stated:

"Whether that air power be based directly upon land, or be based upon floating surface craft, such as aircraft carriers, it is nevertheless 'air power' and wherever that 'air power' is exerted it constitutes 'the first line of defense.'

Armies can only defend against invasion by other armies operating on the ground. Naval fleets can only defend us against other naval fleets operating upon the sea. But these two agencies leave us undefended as against attack and invasion by the 'upper flank.' This 'upper flank' consists of 10 miles depth of air and more, and includes a ring around the United States 10,000 miles long. Every mile of altitude and every mile of length constitutes a possible 'port of entry' for invasion by air, and thus there are as many as one hundred thousand points of attack by air, one hundred thousand 'ports of entry' for invasion by air. This means, to the mind which faces the facts as they are, and as they are sure to be tomorrow, that we must increase our capacity to defend America against air attack. We must not only increase aircraft in numbers and in performance, but we must increase personnel to direct such increased number of aircraft. In air fighting the personality of the individual is the greatest single factor. Leadership in ground fighting and in sea fighting is very important. But in air fighting every pilot must largely be his own leader. He must have within himself the will to conquer. He must possess the willingness to dare and to do and to die, out in the lonely air, away from the inspiration of comrades, away from the bugle blast, away from the waving flag, away from the cheers of his companions, away from the newspaper reporters and photographers to record his heroic deeds. In the council chambers of his own soul the air fighter must hold his rendezvous with death and face that issue alone and upon his decision will depend our defense. He, therefore, must be trained and disciplined to meet that test and to resolve that issue in favor of his country and even against his own life.

The size of our earth shrinks as air power increases. The oceans grow narrower as the range of aircraft widens.

Mr. Speaker, the world is now only one-tenth the size it was before the Wright brothers invented the flying machine. Furthermore, development of air-

craft in speed, in range, in load-carrying capacity, and in other fighting qualities, will certainly reduce still further the size of the world. Only about 100 years ago that 'wet ditch', the English Channel, about 30 miles wide, was an insuperable barrier to Napoleon's ambitious schemes to defeat and humble England. Today who will dare say, in the face of the fighting and bombing aircraft known even now, that America is secure from invasion and attack by air power, even with 3,000 miles of water on her east and 8,000 miles of water on her west? We need not think that other nations will not use air power in any way that it can be used in order to accomplish their will and to defeat an enemy. We would do it if we got into war, and they will do it.

When war comes all conventions, all treaties, and all so-called 'rules of civilized warfare' will crush and crumble like sand cakes. Undoubtedly, in the next war nations possessing sufficient air power will bomb great centers of population and great centers of industrial activity. Undoubtedly in such cases thousands, and maybe hundreds of thousands, of unarmed and defenseless men and women, being citizens of a nation at war, will be killed or wounded or poisoned from the air. There is no such thing as a 'gentleman's war.' If we do not wish to suffer such horrors, then we must keep out of war. We cannot keep out of war by merely wishing to do so. We can only keep out of war by being prepared to prevent invasion and to punish the invader. We can do this only by having adequate and ample air power consisting of aircraft and trained fighters to employ at once such aircraft.

In America only a war of defense is possible. Whoever will not defend America should not live in America. * * "

Further on in his speech, Mr. McSwain refers to his proposal to Congress and to the country of a consistent and coherent program of expansion and development for the air power of the United States. "That program," he stated, "proposes to enlist the individual initiative, the inventive genius, and the scientific skill of every person in America, however humble and obscure or however powerful and widely known. That program has four stages. These four stages deal, respectively, with personnel in the air forces, the reserves for the replacement of the air forces, the organization of the junior air reserve, and a new program of development and improvement under the general head of procurement."

Touching on the personnel factor, Mr. McSwain referred to the Bill, H.R. 4351, to set up for the Air Corps a separate promotion list. This Bill was quoted in the February 1st issue of the News Letter.

Mr. McSwain made the contention that just as there is a separate promotion

list for the Marine Corps in the Navy, so there ought to be a separate promotion list for the Air Corps, even so long as it remains attached to and a part of the Army. There is a different principle involved in the personnel of the flying forces from that in the ground forces. Discipline for an air officer is a different thing from discipline for a ground officer. Esprit de corps, morale, loyalty to the high command, and all of those factors going to make up a strong and coherent military organization have different forms and are to be interpreted in different terms when applied to the men who fight in the air. That is why there should be a separate promotion list.

"The provision for temporary promotions in the Air Corps," Mr. McSwain said, "is not entirely satisfactory. It ought not to be indefinitely continued. As long as the officer personnel of the Air Corps remains on the promotion list of the Army generally, there is no escape from the occasional use of temporary rank. But with a separate and independent promotion list such temporary rank could be immediately discontinued."

Pointing out that every encouragement must be given to the Organized Reserves and toward every factor going into their development and improvement, Mr. McSwain stated that in time of anything like a major war, Reserve officers will outnumber the Regular Army officers 10 to 1. He referred to several bills introduced by himself and one by Mr. Thomason, of Texas, having for their object the development of the Air Reserve. The gist of these bills was given in the February 15th issue of the News Letter.

Mr. McSwain also referred to the Bill H.R. 6621, to authorize the selection, construction, installation and modification of permanent stations and depots for the Army Air Corps, and frontier air-defense bases generally, stating that he is sponsoring this bill most enthusiastically. On March 22nd, the House Military sub-committee approved this bill without a dissenting vote.

It is quoted below, as follows:

"Be it enacted, &c., That the Secretary of War is hereby authorized and directed to determine in all strategic areas of the United States, including those of Alaska and our overseas possessions and holdings, the location of such additional permanent Air Corps stations and depots as he deems essential, in connection with the existing Air Corps stations and depots and the enlargement of the same when necessary, for the effective peace-time training of the General Headquarters Air Force and the Air Corps components of our overseas garrisons. In determining the locations of new stations and depots, consideration shall be given to the following regions for the respective pur-

poses indicated: (1) The Atlantic Northeast - to provide for training in cold weather and in fog; (2) the Atlantic Southeast and Caribbean areas - to permit training in long-range operations, especially those incident to reinforcing the Panama Canal; (3) the Southeastern States - to provide a depot essential to the maintenance of the General Headquarters Air Force; (4) the Pacific Northwest to establish and maintain air communication with Alaska; (5) Alaska - for training under conditions of extreme cold; (6) the Rocky Mountain area - to provide a depot essential to the maintenance of the General Headquarters Air Force, and to afford, in addition, opportunity for training in operations from fields in high altitudes; and (7) such intermediate stations as will, in connection with (6) provide for transcontinental movements incident to the concentration of the General Headquarters Air Force for maneuvers.

In the selection of sites for new permanent Air Corps stations and depots and in the determination of the existing stations and depots to be enlarged and/or altered, the Secretary of War shall give consideration to the following requirements:

First. The stations shall be suitably located to form the nucleus of the set-up for concentrations of General Headquarters Air Force units in war and to permit, in peace, training and effective planning by responsible personnel in each strategic area, for the utilization and expansion, in war, of commercial, municipal, and private flying installations.

Second. In each strategic area deemed necessary, there shall be provided adequate storage facilities for munitions and other essentials to facilitate effective movements, concentrations, maintenance, and operations of the General Headquarters Air Force in peace and in war.

Third. The stations and depots shall be located with a view to affording the maximum warning against surprise attack by enemy aircraft upon our own aviation and its essential installations, consistent with maintaining, in connection with existing or contemplated additional landing fields, the full power of the General Headquarters Air Force for such close and distant operations over land and sea as may be required in the defense of the continental United States and in the defense and the reinforcement of our overseas possessions and holdings.

Fourth. The number of stations and depots shall be limited to those essential to the foregoing purposes."

Sections 2 and 3 of this bill authorize the Secretary of War to secure such land as may be necessary for the purpose contemplated and to set the machinery in motion for the necessary construction work at these air bases.

Section 4 authorizes the appropriation of funds to carry out this Act.

REPORT OF THE FEDERAL AVIATION COMMISSION (Concluded)

In recommending that procurement policies should be planned to encourage the development of integrated manufacturing units carrying on their own research, development, design, and production work, the Commission, taking into account the flexible nature of aircraft production work, does not favor the policy of maintaining on the one hand a number of experimental shops which will create new designs, develop new types of aircraft, and after the first machine has been built and flown take no further interest in their own handiwork, and on the other hand a group of mass production plants that will take over the designs from the experimental units and build them in quantity. Protracted service trials of new types of aircraft develop many shortcomings, and if these manifest themselves at a sufficiently early stage immediate changes in the design can be made. The manufacturer follows his product into service, and if the initial responsibility for the design be taken from him, his interest is diminished as is his desire to produce an improved article in succeeding designs.

The Commission recommends that it should be basic policy to concentrate responsibility by insisting that the whole development remain under the control of a single organization. There may of course be exceptions to this rule where an individual engineer or a small organization possessed of no adequate production facilities produces a design of extraordinary merit and submits it for consideration by the War and Navy Departments. Experience suggests, however, that such cases will be exceedingly rare, and can be met by individually exceptional treatment when they develop. An aircraft design is not an invention. It has passed beyond the point where it can be inspired as a whole by a single individual. Good airplanes are not the product of miraculous inspiration but usually of the coordinated effort of a design and research organization of a dozen or more groups of specialists. Self-contained organizations, able to start with a clean sheet of paper and the appropriate research laboratory facilities and go straight on from that point until their airplanes have been built in quantity and are flying for the Army and Navy, remain the ideal to be encouraged.

Recommending that explicit authority should be granted to the Secretary of War and to the Secretary of the Navy to negotiate contracts for quantity purchases of aircraft and other aeronautical material, subject to the requirement that a full report be made to Congress in each case where the authority is used, the Commission states:

'The further we have pursued our inquiry into procurement methods and problems, the more deeply we have been impressed with the almost unique nature of this particular branch of governmental purchasing. Military aircraft and most of their accessories are articles which are under enormously rapid development

and which are developed in the military interest alone. It is impossible to be perfectly certain of what an aircraft will do until after it has been built, and the construction of the first example must therefore be undertaken before it can be determined whether or not the machine will actually meet military needs. If the Army and Navy fail to buy a machine so constructed, the chance of finding a market elsewhere is practically nil. In other fields, buying under minimum specification can assure a satisfactory article. Here it becomes almost impossible. There are so many factors which determine the degree of merit for military purposes, and the relations among them are so complicated, that it is almost impossible to draw a rigid specification with assurance that all aircraft meeting it will be fully acceptable. Furthermore, the need for the very highest quality is such that buying to a minimum specification would be undesirable in any case if there should be offered at the same time an article exceeding the specification requirements by ten, twenty, or fifty percent, even though its price might be materially higher than that of the article which just barely got by.

The airplane is essentially a proprietary article in that it represents the experience of a particular organization and that it is in constant development. Each machine that an organization produces ought to lead directly into its next design, and each organization develops certain types of structure and features of design of its own of which it becomes the master.

Regarding all these peculiarities, we find it impossible to accept the normal process of competitive bidding and award to the low bidder as being calculated to give the government the best value for its money. It seems to us essential that there should be administrative discretion to balance quality against price, but always keeping quality to the fore. It seems essential that the Services should be able to make purchases of the best type of aircraft available directly from its originator, who is not only in the best position to build it but who in doing the work will be paving the way for his preparation of another design of improved qualities for the same general function.

The Air Corps Act of 1926 provides that when competitive bids are received for aeronautical material, the award may be made 'to the bidder that said Secretary shall find to be the lowest responsible bidder that can satisfactorily perform the work or the service required to the best advantage of the government', and makes the decision of the Secretaries of War and of the Navy upon the selection of the winning bidder final. If that authority were freely and courageously used, and if it were generally understood and accepted that the interests of the Services may very commonly require that awards be made elsewhere than to the low bidder, and if each bidder were required to tender on his own product or on a design turned over for the purpose by the responsible department and upon

which a successful bidder would pay royalty to the originator, and if the fog of legal complication that seems to have settled down on every attempt to buy military aircraft during the past few months could be dispelled, we should see no reason to object to the competitive bidding method except that it introduces some extra months into the already long period of development of a new type of aircraft.

Unfortunately the stipulations of the previous paragraph have not generally been met. The actual award of contracts elsewhere than to a low bidder has been looked at askance as likely to attract public disfavor in the absence of an understanding of all the technical factors involved, although to be sure the present Assistant Secretary of War declares himself quite ready to make the fullest use of his powers under the 1926 Act. With respect to the protection of design right and the use by every bidder of his own designs, the Army has pursued one practice and the Navy another. The whole subject has become involved in a maze of confusion which almost terminated Army aircraft procurement over a period of one full year.

Even further complications are now created by the letter of the Comptroller General of December 12th, which appears to question the legality of the Army's current procedure of requiring the submission of a sample article with a bid and to demand that the Navy practice of letting all bidders compete on a single design which some one of them has developed and which has been accepted as best for the Service shall be the standard. We have already made plain our alarm over the prospective consequences of this ruling, should it be enforced, and its threat to separate the processes of design and production.

While we are hopeful that the present situation may be clarified and that the competitive bidding process may be made workable and brought to a form where it can encourage the development of good aircraft, at the same time we feel that there are occasions on which competitive bidding is bound to be a farce because of the absence of available competition or on which time is so important that the issuance of proposals would not be justified. To meet those cases it seems to us essential that direct negotiation with the manufacturer best able to perform the work (and in some cases as a practical matter there is only one who can perform it adequately) should be authorized.

We recognize the dangers of negotiation, and we recognize that the Congress has very naturally looked askance upon it. We hesitate to propose that negotiative procurement be approved, and we do so only after being convinced that in many cases it is the only method that will work and that will produce a good article in a minimum of time. As a safeguard to be thrown around this extraordinary grant of power, we suggest that in each case where negotiation is used on a contract for a total sum of more than \$10,000 a report should be made to the Congress by the head of the department concerned, explaining the reasons for

using negotiation and the factors that entered into the determination of the price and the other conditions of the contract. Such a report might well include also the identification of the personnel participating in the negotiation.

We hope that with such an assurance of constant information on what is being done and how and why it may seem possible to approve a method of procurement which we understand to be uniformly in use by the great European powers. Alternative methods of allocating work and of fixing price have been tried from time to time both in Great Britain and in France. Competitive bids are still invited on occasions, but they are the exception rather than the rule. The normal procedure apparently accepted in both countries, and in Italy as well, as necessary to the protection of the interests of the government is the buying of the desired equipment from the man who is in the best position to sell it, and at a price agreed upon and accepted by government representatives as fair. American experience seems to us to confirm that of Europe in indicating that that method of buying is essential in many cases to the securing of a satisfactory result.

---oOo---

OFFICERS TO ATTEND AIR CORPS TACTICAL SCHOOL

A total of 50 Air Corps officers will attend the next class at the Air Corps Tactical School at Maxwell Field, Ala. Under Special Orders of the War Department, just issued, these officers are directed to report to the Commandant of this School for duty as students not later than August 29, 1935, viz:

Majors William E. Kepner, Edwin M. Powers*, Kenneth B. Wolfe*, Captains Aaron E. Jones, Alfred J. Lyon, 1st Lieuts. Benjamin W. Chidlaw, Edmund C. Langhead and Alden R. Crawford from Wright Field, Dayton, Ohio.

Major Lewis A. Dayton*, Captains Orvil A. Anderson, Dale V. Gaffney, Edgar L. Sorenson, Carlisle I. Ferris*, Augustine F. Shea*, Kelly Field, Texas.

Major John K. Cannon*, Captain Leon E. Sharon, 1st Lieut. Homer W. Ferguson, Randolph Field.

Major Samuel M. Connell*, Chanute Field, Ill. Captains Harold L. Clark, Harry A. Halverson, Max F. Schneider, 1st Lieut. Lawrence J. Carr, Office of the Chief of the Air Corps.

Captain John M. Clark, Barksdale Field, La. Captain Joseph H. Davidson, 1st Lieut. Nathan F. Twining, Fort Crockett, Texas.

Captain Thad V. Foster, Fort Sam Houston, Tex. Captain Earl S. Hoag, Chapman Field, Fla.

Captains Newton Longfellow, Harold A. McGinnis, 1st Lt. Elwood R. Quesada, Langley Field, Va.

Captain Leland W. Miller, Mitchel Field, N.Y. 1st Lt. James E. Parker, Selfridge Field, Mich. Captains George V. McPike and Chas. E. Thomas, Army Industrial College, Washington, D.C.

Major Raymond E. O'Neill, Captains Ernest Moon**, Ralph A. Snavelly**, and 1st Lieut. Thomas M. Lowe, Maxwell Field, Ala.

Captains Russell L. Maughan, Charles H. Caldwell***, Ford L. Fair***, William D. Old*** From the Philippines.

Captain Merrill D. Mann, Instructor, 33rd Division Aviation, Ill. National Guard, Chicago.

Captain Charles A. Horn, Instructor, Arkansas National Guard, Little Rock, Ark.

Captain Eugene B. Bayley, Instructor, 40th Division Aviation, California National Guard, Los Angeles.

Captain Richard H. Magee, Instructor, 28th Division Air Corps, Pennsylvania National Guard, Philadelphia, Pa.

Captain Claude E. Duncan, 1st Lieut. John H. Dulligan, March Field, Calif.

First Lieut. James T. Cumberpatch, Crissy Field, Calif.

Major Cortlandt S. Johnson****, Rockwell Air Depot, Calif.

*Relieved of temporary Rank, Aug. 20, 1935.

** " " " " Sept. 2, 1935.

*** " " " " effective upon date of departure from Philippines.

**** Relieved of temporary rank, July 26, 1935.

---oOo---

WAR DEPT. ORDERS AFFECTING AIR CORPS OFFICERS

CHANGES OF STATION: To Office, Chief of the Air Corps: Captain James A. Mollison, from Air Corps Training Center, Randolph Field.

To Chapman Field, Miami, Fla.: Captain William V. Andrews, from Bolling Field.

To Boston, Mass.: Captain Walter E. Richards, from Philippines, to duty with Organized Res.

To Bolling Field, D.C.: 1st Lieut. Arthur L. Bump, from Brooks Field, Texas.

To Randolph Field, Texas: 2nd Lieut. George F. Hartman upon completion of tour in Panama: 1st Lieut. Charles A. Harrington from U.S. Military Academy, West Point, N.Y.

To Command and General Staff School, Fort Leavenworth, Kansas, for duty as Instructor:

Captain Sam L. Ellis, upon completion of course of instruction at this school; Major Eugene A. Lohman, from March Field.

To Air Corps Tactical School, Maxwell Field, Ala., for duty on Staff and Faculty: 1st Lt. Laurence S. Kuter, upon completion of course of instruction at that School.

To Omaha, Neb.: for duty with Air Corps at Headquarters, 7th Corps Area: Captain Younger A. Pitts, from Fort Leavenworth, Kansas.

RELIEVED FROM DETAIL TO THE AIR CORPS: 2nd Lieut. Gerhard L. Bolland, and to Hawaiian Department for duty with the Infantry,

---oOo---

Effective March 25, 1935, Captain Fred S. Borum, Air Corps, was assigned to duty as Chief of the Equipment Branch, Engineering Section, Materiel Division, Wright Field, Ohio, with the temporary rank of Major.

First Lieut. James M. Bevans was assigned to duty as Adjutant at the Air Corps Training Center at Randolph Field, Texas, with the temporary rank of Captain.

NO "MYSTERY" IN ROBOT PLANE

Because of many requests from Army and Navy airmen for information regarding the performance of the so-called Robot Mystery plane, the Sperry Company recently issued a statement, with the approval of Mr. Eugene L. Vidal, Director of Air Commerce, outlining certain facts in connection with the big Douglas airliner in which Captains Albert F. Hegenberger and Clayton L. Bissell, Air Corps, have been making flights recently from Oakland, Calif., to test the feasibility and possibilities of accurate aerial navigation employing the Radio compass in conjunction with automatic control of the plane.

It is stated that the plane is equipped with the Kruesi Radio Compass and the Sperry Gyropilot, but they are not interconnected as was implied in some quarters. Of particular interest is the assertion of the Sperry Company that means have been developed by which this may be accomplished. A large number of these radio compasses have been ordered by the U.S. Army, and they are also being seriously considered for numerous transport planes. The Gyropilot is identical with those used on various commercial air transport lines.

In connection with the tests on the Pacific Coast, where up to this writing three long distant flights were completed over the Pacific, the longest being 400 miles out and back again, a total of 800 miles, it is stated that the flying has always been automatic, except for a few minutes after take-off and a few minutes before landing.

The Sperry engineer assigned to the plane reports that the Gyropilot is actually enabling a new technique in aerial navigation to be accomplished; that where formerly it was practically impossible to steer closer than about 2 degrees by magnetic compass, the gyropilot is holding the ship so steady that courses are now being steered by magnetic compass as close as half a degree. By having the airplane under automatic control, the practicability of the radio compass is increased to the nth degree.

The sensitivity of the radio compass is controlled by the volume control on the radio. With the ship under manual control, it is normally necessary to carry a reduced sensitivity setting in order to prevent the compass needle from swinging back and forth across the indicator dial, due to the impossibility of steering a continuously straight course manually. Under automatic control the compass sensitivity can be greatly increased and still have the compass indicator remain steady. The increase in sensitivity permits the compass to show up minute changes of course that otherwise would not be indicated.

It is stated that on completion of the experimental flights on the West Coast, it is contemplated making flights of varying length with this or a similar airplane from the East coast.

NOTES FROM AIR CORPS FIELDS

Barksdale Field, La., March 20th.

Forty-three enlisted men of the Third Attack Group were detailed to Maxwell Field by Third Wing Orders to form a new squadron under the GHQ reorganization plans. Transportation for this personnel to their new station was provided in connection with a formation training flight of 26 planes, led by Capt. C.C. Chauncey, Group Operations Officer. In addition, two transport loads were taken from Barksdale to Maxwell Field. Some of the men made the trip in private autos.

The men transferred were: Sergeants Earl W. Hoyle, Walter M. Atkinson, Ernest Maves, Joseph C. Child, Bruce G. George and Charles L. Bibbee;

Corporals Raymond E. Dunaway, Henry F. Vandergraft, Joseph E. Stinchcomb, Gailey Bradford, Charles S. Thompson, Eurskin W. Nash, Otto J. Butterfass;

Privates, 1st Class, Lee B. Miller, Johan O. Bersaas, Archie Calhoun, Guy E. Cunningham, Loyd J. Gemberg, Bernard F. Ketcherside, Albert Milburn, Jack Anderson, Rolfe M. Watson, Preston Stephens, Leon Z. Grayson, Edgar C. Dawson, Louis P. Buchanan, Roy Moore, Frank Simeresky, Matthew A. Schmidt, Cornett W. Fuliam, John R. Hughes, Sam S. Campbell, James J. Emigh, Kenneth F. Lenhart, Lester B. Camp, Floyd J. Davis, H.M. Tucker;

Privates Andrew J. Nealy, Kenneth D. Coleman, Sidney E. Doga, Lawrence E. Handley, Forest G. Smith and Roosevelt Williamston.

March Field, Riverside, Calif., March 15th.

Ground gunnery installations at Muroc Lake are rapidly assuming shape. Three separate camps are being established with a gunnery and bombing range for each attack squadron. Centrally located and for the use of all is a bomb and powder dump. Present plans also call for the establishment of permanent barracks large enough to house range details, offices, and messing facilities.

Luke Field, T.H., March 8th.

The only officer to depart for a mainland station on the February 12th Transport was Capt. Raphael Baez, Jr., Commander of the 23rd Bombardment Squadron. Captain Baez made many friends while in Hawaii, not the least of whom were the members of his command. At an "Aloha" dinner in the Squadron mess hall, Capt. Baez was shown with what high esteem he was held by both officers and men, and he, in turn, presented the organization with an excellent all-wave radio set.

Flying activities were suspended for several days, an unusually hard rainstorm causing the flying field to resemble a lake in some places. Five inches of rain fell in Honolulu within four hours, flooding most of the streets, roads, washing out several bridges and marooning people at various places.

A flight of three airplanes departed on March 4th to perform towing missions for the

64th C.A. (AA) for the next six weeks at Waimanalo. Additional Air Corps officers will be assigned in order that they may spend two weeks with the Coast Artillery in liaison and contact work.

Following the recent order concerning temporary promotions, considerable reorganization is taking place, with the rank and file wondering how it will all end.

The Luke basketball team won the Sector-Navy Championship for the 4th consecutive year. Most of the games were close and exciting, only two of them going the wrong way. It looks as if the struggle for the Department Championship will again be between the 3rd Engineers and Luke Field, as was the case the past three years.

Hawaiian Air Depot, March 8th.

On February 27th, the Hawaiian Islands were engulfed in a torrential rain, which seriously hampered operations at the Depot. Due to many leaks in some of the old buildings, a considerable amount of supplies was damaged, and it was necessary to stop all operations in the Supply Section and put the entire personnel to work wiping off, recoiling and re-greasing supplies. This rainstorm was out of the ordinary and demonstrated the necessity for a new Air Depot or the expenditure of considerable funds to repair the buildings now in existence. One of the humorous incidents connected with the flood was when Lieut. Carlson endeavored to reach town from the Depot at the height of the storm. He became stuck in the water and upon getting out of his car found a 14" catfish resting on his front fender.

During February, the Engineering Section completed five major overhauls, overhauled seven engines and one major assembly, a B-4 airplane. Production work of this section is rapidly approaching the maximum output of a depot possible under present personnel and building conditions.

Capt. Arthur G. Liggett was relieved as Adjutant and assigned as Squadron Commander of the 23rd Bombardment Squadron, Luke Field. Lieut. Oscar F. Carlson assumed the duties of Depot Adjutant in addition to his other duties.

Fort Lewis, Wash., March 5th.

Capt. I.J. Williams, with Pvt. V.L. Mortvedt took off on an extended flight to Washington, D.C., by the Southern route.

One C-25C airplane was sent to Rockwell Air Depot for overhaul, leaving this station with one C-25C for the next two or three weeks. This plane is now being used for Radio Beam flying and cooperative missions.

An intensive course in landscape gardening is in line for the detachment at this post in an attempt to make grass grow where none grew before.

Lieut. Carl Swyter, Air Reserve, enlisted. He is a candidate for a commission in the Air Corps, Regular Army.

Our Squadron recently entertained a 7-ship representation from the Tennessee Squadron at Nashville. The flight was led by Major Walter M. Williams, Commander, whose passenger was Adjutant General Ballew. Among other members of this flight were Captain W.B. McCoy, Regular Army Instructor, and Lieut. Robert F. Wirsching, on leave from our Squadron and now residing in Nashville. Arriving at Stout Field at 3:10 p.m., the visitors, after making an inspection tour of the buildings and equipment, took dinner at the field club house, which was attended by 33 officers in all, including Adjutant General Elmer F. Straub of Indiana. Short speeches were made by Generals Ballew and Straub, Majors Stout and Williams. After dinner, the Tennessee boys entertained with a song fest of very high quality.

The two squadrons intended having a little practice in larger formation work, using 12 planes, but inclement weather interfered.

This visit by the Tennessee Squadron was both enjoyable and instructive for us. We are always glad to be host to our sister squadrons and feel that there is real training value in the fellowship and closer association thus gained.

Our regular army Instructor, Captain Guy H. Gale, was ordered to the Air Navigation School at San Diego, Calif., which started March 20th. This is a two weeks' course in instrument flying which will be attended by the National Guard instructors and then passed on by them to the squadron officers.

Advanced Flying School, Kelly Field, Texas.

Seventy students reported on March 1st from the Primary Flying School, Randolph Field, and were assigned to specialized training, as follows: Attack, 1 officer, 9 Cadets; Bombardment, 1 officer, 21 cadets; Observation, 2 officers, 1 foreign officer and 17 cadets; Pursuit, 1 officer, 17 cadets.

Personnel assigned to training these students were as follows: Attack, Capt. W.R. Sweeley (Chief), 1st Lieuts. G.A. Whatley, C.P. Bradley, 2nd Lieut. K.A. Rogers; Bombardment, 1st Lieuts. W.E. Whitson (Chief), Joseph Smith, J.M. Fitzmaurice, G.C. Jamison and 2nd Lieut. R.D. Butler; Observation, Capt. G.A. McHenry (Chief), 1st Lieuts. A.F. Shea, O.P. Weyland, E.H. Underhill, T.L. Bryan and F.H. Smith, Jr.; Pursuit, Capt. D.V. Gaffney (Chief), 1st Lieuts. J.S. Griffith, C.K. Rich, H.E. Engler, J.B. Burwell and R.J. Browne.

Effective March 1st, the 81st Service Squadron, Air Corps, was constituted and organized at this station from personnel transferred from other organizations. The 68th Service Squadron was the only one which retained its designation.

Colonel Jacob E. Fickel, Commandant of the Advanced Flying School, was one of the speakers at a reception and banquet given on March 21st in honor of Major General Frank C. Bolles, Commander of the Second Division and Fort Sam Houston. In attendance were the

ranking officers and commanding officers of the fields and stations around San Antonio, as well as National Guard, Reserve and members of the civic organizations of the city.

Permanent officers of Kelly Field who made extended flights between classes were: Captain R.D. Knapp to Boston, Mass., in P-12; to Rockwell Field, Lieut. R.J. Browne in P-12, Lieut. Charles Sommers in C-14; to Santa Monica, Calif., Lieut. J.W. McCoy in P-12; to Bolling Field, Capt. L.A. Dayton and N.W. White in BT-2, Capt. C.C. Nutt in BT-2, Major H.H.C. Richards and Capt. W.M. Lanagan in BT-2, and Capt. O.A. Anderson in BT-2 to Wright Field where he will be on detached service in connection with impending stratosphere flight.

Lieut. A.R. McConnell ferried an C-19 to this station from Rockwell Field.

Having won the 8th Corps Area, local, football Trophy, the Kelly Field fliers proceeded to win the Army basketball Trophy after a season of brilliant playing. Only one of the 12 games played went on the wrong side, the 9th Infantry copping that one by one point, Randolph Field was runner-up with 9 wins and 3 losses.

Lieut. "Ken" Rogers led a field with a 7-4 in the qualifying round of the annual golf tournament in San Antonio recently. He is the outstanding player in the 8th Corps Area.

Hamilton Field, San Rafael, Calif. March 20.

For extraordinary achievement in flying through the blizzards of the Northwest and in directing the ground work of the other pilots of the "Arctic Patrol," Capt. Arthur G. Hamilton, who returned here March 13th, was recommended for the Distinguished Flying Cross by Lieut.-Col. Ralph Royce, who commanded the Cold Weather Test Group. Second Lieut. Birrell Walsh returned with Capt. Hamilton, and 1st Lieut. Paul Kemmer, who also flew as a pilot in this expedition, landed here before Captain Hamilton's arrival. The enlisted men who fought the rigors of the coldest winter which has gripped the Northwest in many years are Staff Sergeant Thomas B. Vinson, Sergeants Roy H. Coulter, George W. Hollowell, Ludwig Kurrley, Corp. Harvid Saeger and Pvt. Jack Matthews. In spite of the severe cold, these men report a very pleasant trip.

The Panama Flight was called off on account of lack of funds, and the 16 officers, 16 enlisted men and 11 B-12 Martin Bombers returned to Hamilton Field.

Brig. General Henry H. Arnold, on March 9th, flew to Hamilton Field on his first official visit since his promotion to a general officer. It is reported that he gave his official O.K. to the field and congratulated Lieut.-Col. Clarence L. Tinker on his recent promotion.

With the return of the Panama Flight, an aircraft classification would show the following types of planes at Hamilton Field, viz: 5 PT-3A, 1 F-26A, 1 C-14 Fokker, 1 BT-2B and 15 B-12A. The Pursuit plane is the command ship of Lieut. Col. Tinker.

Second Lieut. Birrell Walsh assumed command of the 31st Bombardment Squadron since his return from the "Arctic Patrol" on March 12th.

Chaplain Stanley J. Reilly is launching a drive to fill the shelves of the Post Reading

room with books, magazines and treatises on technical subjects, so that the hundreds of young men at Hamilton Field may read for recreation or mental development during their spare hours. In an open letter he is requesting the people of the Bay districts to donate their spare volumes to the airmen at the Marin County field.

Recent duty assignments were as follows: Capt. Guy Kirksey as Post Reclamation Officer; 1st Lt. Wilbur Erickson as Public Relations Officer; 2nd Lt. Lewis L. Mundell, Air Res., as Asst. Supply Officer; 1st Lieut. Alvord V.P. Anderson as Post Transportation Officer, replacing 2nd Lt. Roy H. Lynn; 2nd Lieut. Joseph P. Bohl as Asst. Post Transportation Officer, in addition to other duties; Tech. Sgt. Philip E. Moloney as Post Sergeant Major and Tech. Sgt. Wm. J. Riley as Group Sergeant Major.

"Aviation Medicine" was the subject of an address delivered by Major Robert C. Murphy, Post Surgeon in the absence of Major Fabian L. Pratt, before the Lions' Club of San Rafael. He was then brought into the Lions' den as an honorary member of the "Knife and Fork" Club.

The national game should enjoy its biggest year at the field with 2nd Lieut. Edward W. Suarez officiating as Athletic Officer. With one of the best diamonds on the west coast and a number of fast players, Hamilton Field looks like a pennant winner.

Chaplain Stanley J. Reilly is sponsoring the organization of a N.C.O. Club.

Training for the 9th, 11th and 31st Squadrons emphasized the use of available equipment in practice flights in the B-12 for as many pilots as possible, including also instrument flying for pilots of post and group headquarters. In ground training, preliminary pistol practice, preliminary training of three machine gun crews per squadron, practical instruction of junior flying personnel in combat and ground crews and extension courses for officers of over two years' service outline the salient points of the schedule.

41st Division Aviation, Washington National Guard, Felts Field, Spokane.

An advancement in instrument flying is to be made by pilots of the Division. Ten pilots, who completed their scheduled 10 hours under the hood, will go to cloud flying as soon as the new type radio equipment is installed, about April 1st. Rapid advancement in instrument flying was made possible by the equipment of two Douglas O-38E's with hoods designed by Major Robin A. Day, Squadron commander and instructor. These hoods operate under the glass hood, the canvas covering being drawn forward to the instrument board on two metal rods running forward from the pilot's seat on the sides of the fuselage.

Major Day left Spokane March 18th for Rockwell Field to pursue a two weeks' course at the Air Navigation School. Prior to his departure he conducted the annual Federal armory inspection of troops and equipment.

Langley Field, Va., March 16th.

This station regrets the prospective departure of Capt. George L. Usher, former Post Adjutant and E. and R. Officer, for duty in the Office of the Chief of the Air Corps. Capt. Usher is noted in Eastern football circles for his ability as a coach. His Langley Field football teams have never failed to annex the 3rd Corps Area Championship and they have established an enviable reputation in their games with college teams in Virginia, West Virginia and the Carolinas and with such noted service teams as the East Coast Navy and Quantico Marines. He has also produced splendid teams in other lines of sport.

The 36th Pursuit won the post basketball championship in competition against 3 other Pursuit Squadrons, 3 Bombardment, 2 Service and 1 Airship Squadron and the Flying Cadet Detachment.

San Antonio Air Depot, Duncan Field, Texas.

The monthly Control Area supply and engineering conference at this Depot on March 5th was attended by the following officers: Capts. F.D. Lynch, Raymond Morrison, 1st Lt. Wm. T. Hefley, 2nd Lts. H.W. Grant, J.P. Newberry and J.F. Thompson, Jr., of Brooks Field; Capts. T.L. Gilbert, R.C. MacDonald and H.R. Yeager, Kelly Field, and Capt. E.R. McReynolds, Randolph Field.

Visiting pilots ferrying planes back to various activities included Capt. Myron R. Wood, Randolph Field, with an O-19E for the Colorado National Guard; Capt. C.A. Horn, Instructor, with an O-38 for the Arkansas National Guard, Little Rock, and Capt. A.I. Ennis, Instructor, Minnesota National Guard, with an O-38 for that activity.

First Lieut. Max H. Warren, on completion of his tour of duty in Panama, and upon expiration of two months' leave, will report here for duty.

Lieut. J.H. Hicks piloted civilian mechanics from the Depot to Canyon, in Northwest Texas, to dismantle and ship to Fairfield Air Depot a P-30 forced down by one of the heavy dust storms which have been all too frequent of late in the West and Middle West. Lieut. L.H. Dawson, pilot of the P-30, and Capt. H.G. Montgomery, passenger, both of Selfridge Field, escaped injury.

In the absence of Capt. Ames S. Albro, Technical Supervisor for this Control Area, now on sick leave, the technical inspection of the Texas and Colorado National Guard Air Corps units was made by Capt. E.D. Perrin, Assistant Engineer Officer of the Depot, who was accompanied by Master Sgt. J.J. Fitzpatrick.

Recent visitors at the Depot were Major Vernon L. Burge, of the Tactical School, Maxwell Field, formerly on temporary duty here; Capt. B.S. Thompson, Commanding Officer of Hensley Field, and Major Wm. C. Lewis, Air Reserve, of Oklahoma City, Okla. The last named officer is the U.S. District Attorney at Oklahoma City. Captain Thompson conferred on matters pertaining to airplanes of the Organized Reserves at Hensley Field.

Marshall Field, Fort Riley, Kansas.

Flight D, 16th Obs. Squadron

The officers here are making exceptionally good progress in instrument flying. Flights have been made to surrounding towns and the pilots under the hood generally flew the selected course with a fair degree of accuracy. Our C-25 does not have all of the instruments that are installed on a regular instrument flying ship, but we are making the best of the situation.

Bowling is a popular sport at this post, the organization being represented by teams in the Officers and Enlisted Men's Leagues. Our champion bowler, Master Sgt. Arnold Ruef, whose average score is 177, contributed his bowling technique to the Fort Riley team which defeated the Fort Leavenworth five.

Materiel Division, Wright Field.

Major John N. Joyce, Air Reserve, of Toledo, Ohio, recently completed two weeks of active duty. During the War Major Joyce, then a 1st Lieut., was in the Spruce Production Division of the Bureau of Aircraft Production. While on active duty, in addition to the training given him by the Industrial War Plans Section, he assisted the Chief of the Technical Data Branch in the preparation of historical data on certain wooden propellers which are on exhibition in the Army Air Corps Museum here.

Pittsburgh, Pa., Airport.

Captain Corley P. McDarment, Air Corps, Commanding Officer of the Pittsburgh Airport, recently addressed a meeting of the American Society of Mechanical Engineers, in which he touched upon newest developments in aeronautical engineering. He referred to planes in process of development which wind tunnel tests indicated would attain a speed of 550 miles per hour with the aid of a 2500 h.p. motor. "These are not completed yet," he said, "but my observation has been that the inventions which work on the blueprint in a few years become an accomplished fact."

Referring to the newest Army Bomber with its interesting attachment whereby the wheels can be pulled up into the fuselage, thus increasing its speed from 20 to 30 miles per hour, Captain McDarment stated:

"Its only difficulty is that pilots frequently forget to let the wheels down before they land, with accompanying disaster. To prevent accidents, a red light in the cockpit shines when the pilot prepares to land, and it merely remains for him to figure out what the signal means. If he still forgets, a bell begins ringing in his radio, and the sound of harps will certainly remind him to let down the wheels. If this doesn't work, an ordinary pickhandle with a boxing glove on one end poised on a coiled spring is the last resort."

Captain McDarment read several propositions advanced by aspiring inventors - planes which would carry 15 full-grown men in the best of health with a 25 horsepower motor, and rubber-winged planes to stand the wear and tear of crashes.

Michigan National Guard.

A public address system is being installed in the hangars of the 107th Observation Squadron, Wayne County Airport, to provide band music for official ceremonies, drills and inspections. Speakers, installed on the roof of the hangar, will carry well out over the field. It is expected the system will be ready for a trial at the next drill.

The annual Military Ball, held in the Naval Armory, Detroit, early in March, was an outstanding event and brought together many notables from all parts of the State. An attendance of over two thousand was recorded.

---oOo---

LIBRARY NOTES

Some of the more Interesting Books and Documents Recently Added to the Air Corps Library

D 00.12/123 No. 2-35. Aircraft magnetic compass - Effect of magnetic material and electrical on Compass Deviations, by Bureau of Aeronautics, Navy Dept., March 7, 1935, 8p. (Technical Note 2-35.

C 21 France 4. The Perpetual crisis of our military aviation, by Pierre Etienne. Paris VU, Nov. 14, 1934. 2p. From suppl. of VU, Nov. 14, 1934. Refers to the continual changes in organization, program, equipment and Chiefs during the last 15 years in France. French text.

D 52.16/32. Perils of pure speed, by Christian de Caters. Paris, Miroir du Monde, Nov. 17, 1934. Takes up question whether the limit will be fixed by human or material resistance. French text.

623.74/M59. The gas war of 1940, a novel, being an account of the world catastrophe as set down by Raymond Denning, the first Dictator of Great Britain. London, Scholartis Press, 1931, 302p. An account of a world war that began on Sept. 3, 1940, and ended within the week, and in that short time brought mankind to the brink of destruction.

629.1341/B39. A Girl Flies Around the World, by Elly Beinhorn, Berlin, Hobbing, c1932, 217p. A book of travel rather than a contribution to aeronautics. Nice illustrations. German text.

940.5/L96. The Coming War, by Gen. Ludendorff. London, Faber, 1931. 176p. Ludendorff's book is a warning to his people against being led into a war that would mean certain destruction to them.

Selected Magazine Articles

The magazine "Revue du Ministere de l'Air" is intended primarily for use of personnel of the Air Ministry to keep them informed on technical, tactical and current matters in aviation. Articles in the Jan. 1, 1935, issue, the first one received, include -

Crossing the South Atlantic, by Jean Mermoz.
Examination for Aerial Navigation at the Advanced School of War in 1935 (Air Army)
Blind Flight.

Are Aircraft Carriers Doomed for Service in the Next War, by Andrew R. Boone, Popular Aviation, April, 1935.

Pacific Preview; Pan American Airways forms a new division, by Daniel Sayre, Aviation, March, 1935.

At the request of the Army Air Corps, a special conference was organized by the National Advisory Committee for Aeronautics for the purpose of standardizing the terms used in air navigation. The conference was organized with representatives of the War, Navy and Commerce Departments, and the National Advisory Committee for Aeronautics.

The Chairman of the N.A.C.A. transmitted the "Nomenclature on Air Navigation," prepared by the special conference on air navigation terms, and recommended that it be adopted as standard for use in the War Department. This recommendation was approved by the Secretary of War, March 27, 1935.

A few of the standard terms are:

"Air Navigation. - The art of determining the geographical position, and maintaining desired direction, of an aircraft relative to the earth's surface by means of pilotage, dead reckoning, celestial observations, or radio aids.

Note: The term 'avigation' has been suggested but it is considered unnecessary and undesirable."

"Celestial Navigation. - The method of determining the geographical position of an aircraft by observation of celestial objects."

"Dead Reckoning. - The method of determining geographical position of an aircraft by applying the track and the ground speed as estimated or calculated over a certain period of time from the point of departure or from the last known position. Abbreviation: D.R. D.R. position is indicated by an X."

"Pilotage. - The method of conducting an aircraft from one point to another by observation of land marks, either previously known, or recognized from a map."

"Radio Navigation. - The method of conducting an aircraft from one point to another by radio aids, such as the radio beacon, radio direction finder, or radioed bearings."

The nomenclature of Air Corps Circulars will be corrected to agree with the standard nomenclature when they are revised.

Main Fuel Tank, F-12D Airplane.

From time to time reports are received in this office of the failure of duralumin gasoline tanks. Usually, a failure is a result of a leak developing along a seam or around a rivet head. A particular report from one of the Air Corps stations follows:

"The tank was leaking profusely in the lower center of the back wall, where the baffle plate is riveted to the outer shell. Visual inspection did not reveal any rivets loose, but several minute cracks were found. No members of the fuselage were bearing against the tank at the area of leak. The tank was found to be mounted securely and correctly."

Forced Landing - C-9 Airplane.

An interesting report recently received from one of the fields describes a forced landing of a C-9 airplane, shortly after the take-off. The center engine stopped completely shortly after leaving the ground. The pilot, however, was able to return to the airdrome where he landed. A bad fire had started beneath the disabled engine but fortunately it was extinguished without serious damage to the airplane. The Engineering Report indicated that this airplane, in which a gravity fuel system was used, had on several previous occasions experienced a partial failure of one of its engines shortly after the take-off. The cause of engine failure has, as yet, not been determined but the fire was believed to have resulted from excess gasoline discharged by the accelerating pump, possibly due to a back and forth motion of the throttle in an effort to restart the engine. The gasoline running into the carburetor air scoop may have been ignited by a slight back fire not noticeable to the crew.

The light coating of oil placed on propellers daily in accordance with existing regulations serves a double purpose. It, of course, protects the surface but it also has a tendency to oxidize in any cracks that may be present, making them stand out as dark lines, thus assisting in determination of whether or not any defects exist which would render the propeller unsuitable for flight.

Several activities have reported that the time required to change starters on P-26A airplanes, equipped with R-134C-27 engines, is excessive, due to the inaccessibility of the bottom 3/8" nut, which cannot be safetied or tightened, unless the left carburetor air intake stacks and left magneto are removed.

The following comments have been extracted from the reply of the Materiel Division to the Unsatisfactory Reports referred to:

"2. A nut, Part No. 521, may be omitted from the lower starter stud, Part No. 641, when installed in the starter, but the nuts on the remaining starter studs will be securely tightened and properly safetied. **

"4. A technical Order on this subject is in the process of preparation."

In reply to a communication to the Materiel Division with reference to difficulties being experienced by the Service in lubricating exhaust valves of radial engines by the injection of 120-second oil, the Chief of the Materiel Division stated:

"This Division has realized for some time that 120 second oil is unsatisfactory for V-6752, A.C.

use in the rocker boxes. Therefore a large quantity of 3000-second oil was procured. Instructions on the use of this oil can not be published at this time due to the lack of suitable oil guns for this type oil. Tests are now being conducted at this Division on several makes of lubricators to determine which is the most suitable for handling 3000-second oil. As soon as this has been determined, the procurement will be made and technical instructions will be issued covering the use of 3000-second oil."

The following is extracted from a letter to the Chief of the Materiel Division, with reference to the man hours required for the routine 20 and 40-hour inspections of P-26A type aircraft:

"2. The average man hours required for the 20-hour inspection totals 23:35. However, it appears that approximately 3:00 of this time are required for the removal of exhaust stacks to permit checking backlash and for the removal of about 100 cowlings screws to permit inspection of the angle assembly, main tank supports. * * * "

The Chief of the Materiel Division replied as follows:

"a. The 20-hour inspection of main tank support fittings referred to in paragraph 2 can soon be eliminated as new steel fittings are being manufactured at one of the depots and will be installed as soon as they are available.

"b. The reference to removal of exhaust stacks to permit checking back lash evidently pertains to the magneto inspection called for in paragraph 6b, Technical Order 02-1-36. The P-26A's should all be equipped with engines having magnetos with the required gear changes made by the manufacturer. Paragraph 2, Technical Order 02-1-36, also requires the installation of new gears before any unmodified magnetos are installed as replacements. The inspection for back lash is therefore unnecessary where magnetos are equipped with the new aluminum-bronze and hardened steel gears, and Technical Order 00-20 (page 21) should be waived accordingly. A survey will be made to determine if all magnetos have been changed, so that Technical Orders 02-1-36 and 02-1-35 can be modified to eliminate unnecessary inspections of any V-AG installations. Incidentally, it will be noted that paragraph 5, Technical Order 02-1-36, provides a means for identifying by external markings, the magnetos that have had new gears installed."

The following difficulties have been reported in recent Unsatisfactory Reports:

Casings, Streamline, 24": Casings installed on P-26A airplane. Upon inspection, casing was found to have a ridge formed on inside, approximately 10" long, running lengthwise, which had rubbed on the tube and had worn the tube sufficiently to weaken it.

Reply to UR: Examination of the casings submitted shows the unsatisfactory condition to be due to a manufacturing defect. The inside ply of the casings apparently wrinkled after being placed in the mold and was cured in that condition. This is sufficient cause for rejection and your stock should be inspected and those found with similar defects should be disposed of.

Carburetors, NAYSC: In flight, pilot found it impossible to reduce the speed of the engine by the use of the throttle. Investigation showed that the economizer needle seat was loose and caused the malfunctioning of the carburetor.

Cock Assembly, Fuel, Type K-2: The stem assembly, fuel cock, as shown on this drawing, under Part No. 34B3828, is not part of the K-2 Fuel Cock. It is believed that this stem will only fit the type K-1 Fuel Cock, as shown on Drawing 34B3478.

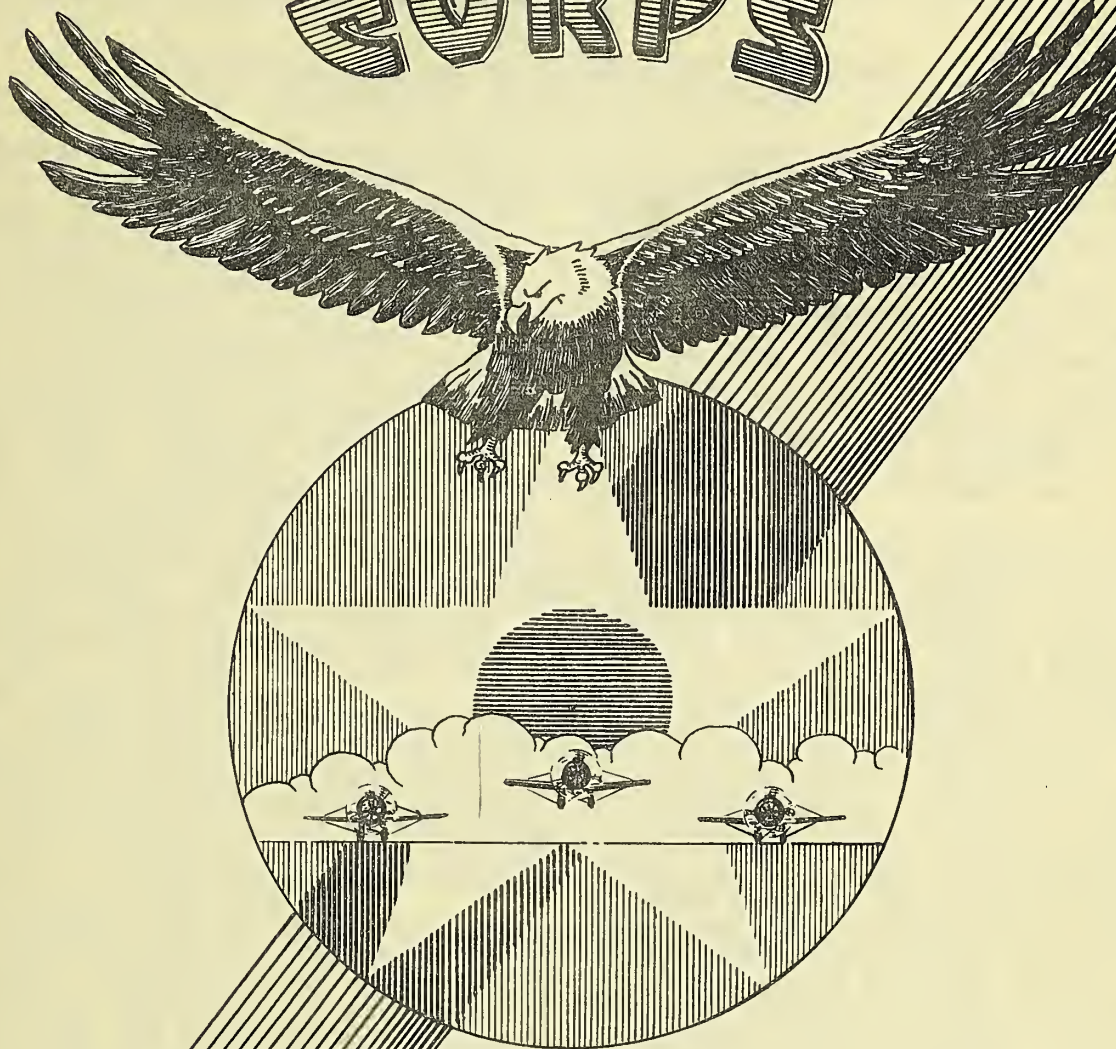
Reply to UR: The earlier type K-2 Fuel Cock Assemblies, which total approximately 50, were procured from two sources. It is the opinion that an attempt had been made to install the stem assembly removed from one make of fuel cock into the other, in which case difficulties, such as reported, would be encountered. However, stem assembly, Part No. 34B3828, can be used in either the type K-1 or the K-2 Fuel Cock Assemblies that were manufactured in accordance with Air Corps Drawings 34B3478 or 34B3479, the latter prepared to incorporate the desired features of the two non-standard type K-2 Fuel Cock Assemblies, previously mentioned.

---oCo---



7.2.7

AIR CORPS



NEWS LETTER

LUNNINGTON

ISSUED BY THE OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON, D. C.
VOL. XVIII APRIL 15, 1935 NO. 7

THE
STORY



ZWISH MATTER

THE STORY OF THE ZWISH MATTER
AND THE ZWISH MATTER
AND THE ZWISH MATTER

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

PROPELLER FAILURE UNDER NEW FORM OF ANALYSIS

By Lieut. H. H. Couch, Air Corps

A strange problem presented itself to the Air Corps Materiel Division during 1934 in the repeated failure, both in military and commercial service, of metal propellers built from materials whose endurance stresses were well above the computed stresses under which failure in operation occurred. For example, aluminum alloy propellers with an endurance limit of 12,000 pounds per square inch failed under computed operating stresses of 3,000 pounds per square inch. Likewise, hollow steel propellers, the endurance limit of whose material was 40,000 pounds per square inch at the point of failure, had failed at computed stresses of 15,000 pounds per square inch. Here was a technically puzzling situation, the solution of which offered to engineers something of a problem. Clearly, the problem was not one of simple stresses.

The question arose as to whether some form of vibration could possibly be responsible for these failures, and it was decided that the only determination of this point lay in a study of the various types of vibration possible in aircraft propellers. This study the Materiel Division decided to undertake.

A propeller may be defined as a tapered twisted beam made up of thin airfoil sections. The blade deflects easily about a neutral axis that is almost parallel to the chord of the airfoil section and is rigid about an axis at right angles to the neutral axis. For the excitation of vibration, the following plan was tried:

The assembled propeller was suspended in shock absorber cord of such elasticity that a low natural frequency would result. A rotating eccentric weight driven by a small air motor was mounted on the front of the propeller hub so that the plane of rotation of the weight passed through the center line of the propeller blade. The speed of the motor was then gradually increased until violent vibration resulted.

Under the vibration forces at various frequencies it was found that the action of the blades was similar to that of reeds. The tips showed a large amplitude of movement, while certain stations or nodes on the blades remained practically stationary. These nodes were located by a unique method. Fine wood

dust or sand was shaken on the blades and results noted. When a resonant vibration frequency of the blade was reached, the dust or sand completely worked off the blades except at the stationary nodal points where a narrow band of it remained. Thus were the areas of weakness definitely located. By vibrating the blades for several hours with the air motor, tip failures occurred that were almost identical with those obtained in flight. These failures invariably occurred in the near vicinity of the node nearest the tip.

A study of all Air Corps propeller failures since 1929 revealed the fact that most of the failures occurred on engines having crankshafts in which the natural frequency at the crankshaft could be excited by engine explosion frequency. An instrument developed by F.L. Prescott, of the Materiel Division, has proved very valuable for determining resonant crankshaft conditions. A crankshaft having a bad torsional whip or vibration first manifests itself in galled rear cones. If the propeller blade has a resonant frequency that coincides with the crankshaft frequency the result is usually a tip failure in the near vicinity of the node nearest the tip. These failures usually occur between 50 and 150 hours of operation.

In cases where the blade resonance frequency does not coincide with the frequency of a crankshaft that is operating under bad resonant conditions, the result is usually a blade failure near the hub, a hub failure, or a crankshaft failure. Resonant frequency in the blades can also be excited by blades passing too near objects such as a mud guard or the side of the fuselage.

A method of determining the type and frequency of vibration of the blades and the actual stresses in the blades under flying conditions is being developed by Materiel Division engineers. With the knowledge now at hand it would have been possible to predict practically all of the failures of service type propellers that have occurred in the Air Corps since 1929. In several cases it has been necessary to change propellers and restrict engines to a specified range of operation to prevent failure.

Every possible effort is being made at

V-6766, A.C.

the present time to obtain new equipment on procurement that will be free from dangerous crankshaft and propeller vibrations in the normal operating ranges of engine r.p.m. used in flight.

A more detailed study of the types of vibration possible in aircraft propellers is contained in Air Corps Information Circular No. 683.

Editorial Note: Lieut. H.H. Couch, the author of the above article, under whose direction the method of vibrational testing of propellers was originated and developed, has been at Wright Field with the exception of a few months since 1929, when he reported to attend the Air Corps Engineering School. Graduating in 1930, he was assigned elsewhere for a short period, and returned to the field in December of the same year. He served as an American representative to the Handley Page Co. in England during the World War, and saw flying service elsewhere in Europe. He holds the degree of B.S. in Aeronautical Engineering from the University of Michigan (1922) and the Army ratings of airship pilot and balloon observer. His contribution to aeronautical science in the new test methods described above is among the important ones of recent years.

---oOo---

FRANCE LEANS TOWARD MULTI-PLACE PLANES

In a recent lecture to air reserve officers taking an advanced training course, General Denain, French Air Minister, stated that for reasons of economy, the Air General Staff adopted the idea of a multiplace combat plane. "There is no doubt that after six months of war a very great specialization in the various kinds of aviation would be attained, as the question of money, in time of war, does not matter," the General said, adding that for the present the French had the multi-purpose plane fulfilling the requirements of the program of November, 1933. For interception, they have the gun-engine single-seaters with a speed of over 400 Km/h (248.5 m.p.h.).

General Denain then referred to the idea, inspired by the Navy, of a "contact" plane - multi-seaters - capable, in view of their special construction, of making contact with enemy units marching against an objective without attacking them (even refusing combat), but which, thanks to their speed, would keep not only land stations but also interception units taking off a little later, informed of the enemy's moves via radio.

General Denain stated that the Martin bomber has a speed of 325 Km/h (192 mph) at 1500 m., but has not the same ceiling as the Bloch 200 (whose speed is 295 Km/h (183 mph), nor its complete defense. The Air Minister said France would have 270 Blochs by the end of 1935, which

would be superior to the German Junkers 52 and to the American Orions. The Bloch carries 1100 Kg. (2424 lbs.) of bombs for a distance of 1000 Km. (621.37 miles).

The Minister then spoke of recent orders to be delivered during the year, mentioning the Farman 221 night bombers, the Amiot 140 multiple fighters, the Dreguet 41 combat planes, the Devoitine equipped with a cannon, the Potez 54 combat plane, the Mureaux reconnaissance type and the Liore 205 bombers.

"At the end of 1935, the Air Army will have 600 modern planes, and at the end of 1936, 1,000 first-line planes, as follows: 350 bombers, 340 fighters, and 310 information planes. By comparison with the present number (given as 1850), the speed and radius of action will have been doubled."

General Denain said the personnel would be trained at the Versailles Air School. The lowering of age limits will permit promotion of younger officers to the higher ranks. The new organization of the reserves and the perfecting of present training methods have already given satisfactory results. From 1936 on, the personnel of the reserve squadrons will be mobilized with the unit to which they are attached for training. A statute for reserve personnel will be based on that for regular air personnel.

France will be divided into three air regions (Paris, Tours and Lyons), plus a fourth one in North Africa (instead of the present five). This will facilitate general organization already perfected by the change from 11 regiments to 25 wings.

---oOo---

INSTRUMENT FLYING AT OLMSTED FIELD

The one airplane at Olmsted Field, Middletown, Pa., which is completely equipped for instrument flying, a BT-2B, has been very much in demand since the advent of warm spring weather. This airplane is equipped with an instrument flying hood, a complete set of flight instruments, intercockpit phones, and two-way radio, providing all the necessary facilities for navigation by instruments.

This station is fortunate in that a Department of Commerce radio beam is located seven miles from Olmsted Field, one beam of which extends directly over the field. Many of the pilots of this station have attained a degree of proficiency in navigation by radio such that they are able, while under the hood, to proceed to the field from any given point within range of the radio beacon, close the throttle while still under the hood, then open the hood and glide to a landing without further use of the engine; this, despite the fact that Olmsted Field is 7 miles distant from the radio beacon.

OUR NEW ARMY POST

By Captain H.B. Nurse, Q. M. C.

Reprinted by special permission of the Editor of "The Quartermaster Review."

With the development and expansion of the Army Air Corps, new Posts for the housing and training of this highly technical branch of the armed service have been made necessary. Invariably, these Air Posts have, through necessity of topographical requirements, been developed along entirely new lines, and in no sense are they a continuation of, or addition to, an existing, and in many cases, antiquated, Army Post, as so often occurs in the expansion of other Line Organizations.

Eliminating the necessity of building to harmonize with existing facilities, it has been possible to eradicate previous standards of an antiquated origin, and start from the ground up along an entirely new line of thought. The Quartermaster Corps entered into these new problems with enthusiasm and a determination to develop along the line of most modern "city planning" a group of new Air Posts, which are fast proving to be models worthy of admiration from the lover of good architecture, as well as the efficient and most exacting municipal engineer.

In each case the location of sites for these new Posts has been most admirably selected for the purpose intended; especially is this true in the case of Hamilton Field, the Army's newest Air Field.

To the north of the sparkling waters of San Francisco Bay lies a dreamy and enchanted playground where, for over a hundred years, people who love to live have found escape from the busy world, and with their precious heritage of gay leisure the present population of this romantic spot fairly radiates hospitality quite reminiscent of the old Spanish Grandee, which contributes a charm and an appeal hard to resist. It is within this most favored setting that Uncle Sam has selected a site for the building of Hamilton Field.

In the heart of Marin County, only one hour from gay San Francisco, the world's most cosmopolitan city, lie the wood-studded hills bordering the acreage where, within the past two years, has been built this most modern Air Field, an accomplishment of the Construction Division of the Quartermaster Corps. It is the charm of this place which caused the Chief of Air Corps, on his recent tour of inspection, to exclaim with unrestrained enthusiasm, "This is the most beautiful Post in the entire world!"

Hamilton Field originated with a plan launched in 1928 by the War Department to establish an Air Field for a bombing group at some point on the West Coast.

Early in 1929, prospective cities

were inspected by a board of officers, and of the various sites suggested, the one located in Marin County was finally approved, principally because of its central location between our Canadian border and our Mexican border. Other reasons contributing toward the selection of this site were the facts that it is sheltered from the sea by a low range of mountains and is far enough inland to be free from gun-fire of an enemy's fleet; that it is adjacent to the principal manufacturing district of the West Coast; that it is remarkably free from fog, the weather being never too hot and never too cold, which allows a maximum number of flying hours throughout the year.

On July 3, 1930, President Hoover signed the "Kahn" Bill which provided the initial appropriation of \$1,412,117.87 for construction.

Captain Nurse arrived in Marin County on April 28, 1931, to assume the duties of Constructing Quartermaster in charge of the planning and the construction of this Air Field. Considerable delay was caused in securing title to the property, but through the untiring efforts of the public-spirited business men of Marin County, by whose patriotic action the tract of land was donated, the title was finally cleared up and this new Air Field became a reality when on March 17, 1932, the site became the property of the United States, as the deed was turned over to the War Department.

This delay, although aggravating at the time, proved a blessing in disguise, in that it gave ample time to thoroughly plan every facility and iron out inequalities that are so often encountered in vast engineering problems of this nature where speed is paramount.

The new Air Base was officially designated as "Hamilton Field," in honor of First Lieutenant Lloyd Andrews Hamilton, Seventeenth Aero Squadron.

Lieutenant Hamilton was awarded the Distinguished Service Cross by the United States Government for extraordinary heroism in action at Varssonaere, Belgium, August 13, 1918. Leading a low bombing attack on a German airdrome 30 miles behind the lines, he destroyed the hangars on the north side of the airdrome, and then attacked a row of enemy machines, setting fire to three of the German planes. He then turned and fired machine gun bursts through the windows of the Chateau in which German pilots were quartered, twenty-six of whom were afterwards reported killed. Lieutenant Hamilton was later killed in action near Lagnicourt, France, on August 26, 1918.

On September 26, 1933, another incentive was given to the construction program when an additional amount of

\$3,462,183.41 was provided under the Public Works appropriation, making a total appropriation to date of \$4,874,302. Hamilton Field provides accommodations for 79 commissioned officers, 70 noncommissioned officers, and 800 enlisted men. The reservation comprises a total of 928 acres. Approximately 160 acres lie in the form of a low range of hills, which make an ideal residential section. Beyond this range of hills and San Pablo Bay, lie 768 acres of flat, level land, which is utilized for a landing field approximately one mile square. This low, level land is two feet below mean low tide, but is well protected by a substantial levee that has been in existence for over thirty years.

Originally the waters of San Pablo Bay lapped the foothills that now form the residential area, but during the placer mining operations in the Sierra Nevada Mountains, mine tailings were swept down the American and Sacramento Rivers through Jarquinez Straits and swirling into the more placid water of the Marin shores, they settled and gradually built up this area, which later on some enterprising individual reclaimed by the construction of a levee at its outer edge and by pumping the excess water up into the Bay.

On entering Hamilton Field, one passes down a wide palm-lined avenue, leading to Headquarters, established in a building which is a replica of the old missions of early California; with its deep arched loggia, one might expect to catch a glimpse of the dark-robed figure of a Spanish Padre strolling with prayer-book in hand, and at eventide to hear the pealing of bells calling the faithful to the hour of vespers.

Just beyond Headquarters, one will find the technical building, all in gleaming white, relieved by the bright green of abundant semi-tropical shrubbery. Modern Barracks, each to house two hundred men, and a long double row of hangars of gigantic proportion, are the last word in appointment.

Literally, Hamilton Field is a little Spanish Village just sprung from the hills. Here, beauty, comfort, and utility have been combined, looking toward the health, social intercourse, and contentment of its inhabitants. Homes built of individual character, without the monotonous similarity of the usual army post, tree-lined boulevards, shaded lawns, and the informal but attractive winding of streets through the natural contours of the hills lend charm.

The houses, most modern in appointment, yet truly Spanish in character, are not placed in stiff and dignified rows, but informally scattered so as to take advantage of the wonderful vista of San Pablo Bay to the east, across whose placid waters the Contra Costa shores are visible, or to the West, overlooking the majestic Coast Range Mountains, where

the lofty peak of Mount Tamalpais is superimposed.

As a fitting crown to a high promontory in the residential area, a rambling building, that might have been the hacienda of some early Spanish Grandee, is the Officers' Club, with its complete facilities, including lounge rooms, game rooms and a model kitchen. Occupying one rambling wing are several suites of rooms where visiting officers and their families may be very comfortably put up. Within the environments of the spacious patio surrounded by the wings of this building, one listens for the strumming of guitars played by some bold Caballero to his dark-eyed Senorita; though gay fandango and the fiesta here have given way to the more modern dancing, yet romance and gaiety still abound.

Plants and shrubs have been propagated in our own nursery, established at the beginning of the project.

When the newly assigned officer arrives at Hamilton Field with his family, he will find not only a modern and up-to-the minute home awaiting him, but also a completely beautiful lawn, with a profusion of shrubs and flowers, for which California is so well famed. In fact, nothing has been spared by the Quartermaster Corps in making this army post a real home for its occupants.

Additional information on Hamilton Field, furnished by the News Letter correspondent, is given below, as follows:

Hamilton Field is a seaport as well as an airport. Three miles of canal connect it with the deep water of San Pablo Bay which gives access to the Pacific through the Golden Gate. This canal was dug as part of the \$5,000,000 construction project at the Marin County Field. Captain Howard B. Nurse, Construction Quartermaster, believes that this barge canal will save the government thousands of dollars, due to the fact that the government receives water rates from the railroad which hauls freight into the post. Otherwise the canal might be used at any time as there is small wharfage at the terminus near the boathouse.

The Hamilton Field Navy has a crew of four men from the 70th Service Squadron. Sergeant James M. Hotalen and Privates Lawrence Brogan, Ellis A. Larsen and Thomas Dickman the three boats. The J-40 is used as a crash boat to rescue personnel of aircraft who may have the ill fortune to nose dive into the Bay. The P-7 is in drydock. A sea sled with a reputed speed of 35 miles per hour is the only fast water transportation. The other two boats will make about 15 miles per hour.

The whole setting of Hamilton Field is redolent of early California. Not only the architecture of the buildings but also the landscaping shows the influence of the early Dons. The plant life

selected includes 6,000 trees of the early native flora. Among these are conifers, ash, palms, walnut and bamboo. Second Lieut. Robert E. Cron, Jr., Asst. Const. Q.M., is in charge of this work.

---oOo---

INSTRUMENT FLYING IN HAWAII

In September, 1934, at the direction of the Wing Commander, Colonel Delos C. Emmons, a Wing Instrument Flying School was established for all pilots stationed in the Hawaiian Department. Realizing the importance of instrument flying training to Air Corps officers, Colonel Emmons desired that the proficiency of the pilots in the 18th Composite Wing in this type of flying be brought to the highest possible standard. He selected Lieut. Elmer J. Rogers, Jr., of the 5th Composite Group, Luke Field, to direct this school, because of that officer's past experience as instructor in instrument flying.

Lieut. Rogers assisted in the early experiments which led to the establishment of the Instrument Flying School at Brooks Field, Texas, in 1929, taking charge of this school at a later date, and thereafter establishing such schools at other posts, including Chanute and Mitchel Fields, and lecturing on the subject to a number of National Guard Squadrons.

It was Colonel Emmons' plan that one pilot be selected from each of the tactical squadrons of the 5th Composite Group at Luke Field and from each of the tactical squadrons of the 18th Pursuit Group at Wheeler Field, to act as assistants to Lieut. Rogers and as the Instrument Flying instructors for their respective squadrons.

Considering officers who possessed the qualifications and experience which made them best fitted to act as instructors in this type of flying, Lieut. Rogers selected as his assistants Lts. Gilkey, Morrow, Starkey and Ladd, of the 5th Composite Group, and Lts. Winn, Nelson and Keillor of the 18th Pursuit Group.

Going a step beyond the requirements as set forth by the Chief of the Air Corps for this phase of training, Col. Emmons set as the goal to be attained by this Wing, 20 hours of instrument flying for each pilot. To date, every pilot who had not had a basic course in instrument flying has received a 10-hour basic course, completed within 42 days, as required by Air Corps Circular 50-1, under the guidance of a thoroughly qualified instructor, and has been given a diploma, signed by Colonel Emmons, attesting to this fact. Every pilot who had received such a basic course at some other station received a refresher course, varying in length from 30 minutes to 5 hours.

Toward the accomplishment of the goal of 20 hours per pilot for the Fiscal Year, one squadron has already completed that amount; two other squadrons are ahead of schedule, and the remaining squadrons have progressed sufficiently far to warrant the assumption that they will have completed this amount before July 1st next.

The officers of the Wing have been eager to take these courses of instruction, and in some instances officers who had already received a basic course at another station requested permission to undergo a second course of instruction. It is due to this fact, perhaps more than to any other, that the progress in the Wing School has been so gratifying.

---oOo---

GENERAL SIMONDS INSPECTS LANGLEY FIELD

The Deputy Chief of Staff, Major-General George S. Simonds, arrived at Langley Field, Va., from Washington in a Ford Tri-motor plane on March 27th. Immediately following his arrival, an aerial review was staged in his honor by the Second Wing, General Headquarters Air Force, after which an 18-plane Pursuit squadron, led by 1st Lieut. C.G. Goodrich, performed a spectacular combat drill as a team of elements, team of flights and squadron team in "String" formation.

General Simonds departed the following day to continue his inspection trip of United States Army Posts, the proposed route out of Langley Field being: Pope, Maxwell and Barksdale Fields.

---oOo---

TACTICAL TRAINING IN HAWAII

"Of a distinct advantage to the flying personnel of the 18th Pursuit Group," says the News Letter Correspondent, "is the opportunity we have of frequently participating in Field Exercises and Maneuvers of the Hawaiian Division. The Division, itself, enjoys the distinction of being the only completely assembled organization of that designation in the United States Army."

During the Maneuvers in December, 1934, the entire Division took the field for the period of a week, conducting comprehensive problems under actual field conditions.

The Air Force was called on to perform both day and night missions, calling for Pursuit, Attack, Bombardment and Observation aviation. Due to the heavy tropical growth along the trails and the excellent instruction previously received by personnel of the Division with reference to concealment, the problems presented were most difficult. However, the training received was most instructive, and many valuable tactical lessons

V-6766, A.C.

were learned.

In view of the desire of the Chief of Staff of the Army to familiarize the Air Corps with the functioning of the various ground branches of the military service to a greater extent than now practiced, few stations are better equipped for such an excellent opportunity than is Wheeler Field.

---oOo---

PRAISE FOR 41st DIVISION AVIATION

Praise of an exceptional nature was given the 41st Division Aviation, Washington National Guard, by Major-General Paul B. Malone, recently appointed Ninth Corps Area Commander, on his inspection of military units at Spokane, Wash.

"This is the finest National Guard aviation setup that I have ever seen," Gen. Malone stated. He was especially pleased with the new \$102,000 hangar at Felts Field, about which he inquired particularly, especially into the finances necessary to its construction. He inspected Felts Field closely, asking many questions about the size of the airport, prevailing winds and drainage.

During the course of his hour's visit at the airport, he was told about Spokane's ambition to secure a Regular Army Air Corps depot under the National Air Frontier Defense program being considered by Congress.

General Malone indicated a real interest in the preparation of accurately scaled air maps for fire-control purposes, and stressed particularly the importance of contours on these maps.

His query as to whether the organization had prepared such a map for the 41st Division encampment in June at Fort Lewis and Camp Murray was answered in the affirmative.

At a banquet in the evening, more than 300 citizens of Spokane honored the General with their presence and heard a most stirring presentation of military importance at this time.

---oOo---

FLYING CADET STILL MISSING

Flying Cadet Milton A. Lampl, Air Corps, mysteriously disappeared during the night of March 10th, while en route to Selfridge Field from Cleveland Airport, Cleveland, Ohio, on an aviation training flight.

Cadet Lampl had departed from Selfridge Field on March 9th, flying to Chanute Field, Ill., Schoen Field, Indianapolis, Ind., and to Cleveland, where he remained overnight. Departing from Cleveland at about 7:00 p.m. the next day, with weather conditions indicated as fair. The ceiling was about 800 feet and it was raining, but conditions were indicated as gradually becoming better toward Detroit. Shortly following his departure, the

weather became very bad, and at Selfridge Field a heavy ground fog set in. The P-26 flown by Cadet Lampl was equipped with two-way radio and night flying apparatus, but nothing was received from him indicating that he attempted to use his radio to get in touch with the command set at Selfridge.

At about 10:00 p.m., Lieut. Harlan T. McCormick, the Station Operations Officer, broadcast the following message: "Fly West and bail out." Whether Cadet Lampl received this message is doubtful, but the entire First Pursuit Group spent two whole weeks scouring the countryside around Cleveland and between that city and Selfridge Field, and as far west as Kalamazoo, Mich., in the hope that some trace of the plane might be found. Thus far, however, the search has proved fruitless. The Group continues to dispatch airplanes to run down clues phoned to the field.

---oOo---

REORGANIZATION UNDER WAY AT MARCH FIELD

Much of the time and effort of the personnel at March Field, Riverside, Calif., has recently been spent in reorganizing to meet the requirements for the GHQ Air Force. Unlike most stations, the new GHQ set-up changed the basic Air Force designation of the principal organizations at this field. The 17th Pursuit Group was changed to the 17th Attack Group.

In addition to organizing the 1st Wing Headquarters, work has now been completed in reassigning personnel to the new tactical units composing the 17th Attack Group. The only things remaining to complete the change are the confirmation of orders of officers for the various command and staff functions and receipt of the new planes with which the new Attack squadrons are to be equipped. Enthusiasm for the change has been somewhat dimmed by notification that the new Northrup Attack planes will not be ready for delivery at March Field until some time in March, 1936. In the meantime, the present equipment (Boeing P-26's) are rapidly being sent to the Boeing factory, where flaps are being installed to reduce landing speeds.

---oOo---

GENERAL FOULOIS VISITS RANDOLPH FIELD

Major-General Benjamin D. Foulois, Chief of the Air Corps, arrived at the Air Corps Training Center on March 29th and spent the next three days inspecting Randolph and Kelly Fields. His many friends were glad to welcome him again.

On Sunday morning, General Foulois attended a sacred concert in the Randolph Field chapel, given by 44-voice choir of the Texas Lutheran College. After the services he inspected the chapel and expressed his satisfaction.

BRIGADIER-GENERAL HENRY H. ARNOLD

Twenty-four years ago this month, a young Army Lieutenant arrived at the thriving little city of Dayton, Ohio, on a mission which proved to be the turning point in his army career. He had been ordered by the War Department to proceed to Dayton to undergo instruction at the flying school conducted by the Wright Brothers.

Today this same officer, Brigadier-General Henry H. Arnold, Air Corps, occupies a very important position in the military service, being the commander of the First Wing of the General Headquarters Air Force at March Field, Riverside, Calif.

General Arnold is an aviation pioneer in the true sense of the term. When he reported at Sims Station, now the site of the Air Corps Depot at Fairfield, Ohio, he found a barn-like structure which housed several of the early Wright biplanes, with their 40 h.p. engines, their two propellers in tandem, their two seats in front, side by side, and their three control sticks. His contemporaries in those early days of aviation were such well known pioneer aviators as Walter Brookings, Ralph Johnstone, Arch Hoxie and Arthur L. Welsh, comprising the original flying team of the Wright Brothers; Lincoln Beachy, the dare-devil; Claude Graham White, the Englishman; Louis Paulhan, Jules Vedrines and Hubert Latham, the Frenchmen, and last, but by no means least, Lieut. Benjamin D. Foulois (now Major-General and Chief of the Army Air Corps).

During his first year as an aviator, General Arnold made 140 flights for a total duration of 29 hours, a record to be proud of in those early days. The following year the number of flights increased to 209, and he garnered new laurels for the miniature Air Corps by initiating many of the early aviation developments and finally winning the Mackay Trophy. He was the first officer to win this Trophy and, after a lapse of 22 years, won it again.

General Arnold won the Trophy for 1912 by flying over the triangle Washington Barracks, D.C., Fort Myer, Va., and return to College Park.

In the summer of 1934, General Arnold was in command of the flight of ten B-10 Martin Bombers, flying from Washington, D.C. to Fairbanks, Alaska, and return. He was awarded the Mackay Trophy for that year for his leadership on this expedition.

Born at Gladwyne, Pa., June 25, 1885, General Arnold, after graduating from the United States Military Academy, West Point, N.Y., June 14, 1907, was appointed a second lieutenant of Infantry. He was promoted to 1st

Lieutenant on April 10, 1913; Captain, May 20, 1916; Major, July 1, 1920; Lieut.-Colonel, February 1, 1931; and Brigadier-General, March 1, 1935.

General Arnold graduated from the Army Industrial College in 1924, and from the Command and General Staff School, Fort Leavenworth, Kansas, in 1929.

Prior to his detail to the Aviation Section, Signal Corps, in 1911, he served successively with the 9th, 13th and 3rd Infantry regiments. During two years of his service with the Infantry, he was on duty in the Philippines where he conducted a topographical survey of the Island of Luzon.

Following the completion of his flying instruction, General Arnold was assigned to duty at the Signal Corps Aviation School, established in 1911 at College Park, Md., the government having leased a thousand-acre tract of land at that place for use as a flying training school. He was with the school when it was transferred to Augusta, Ga., in the fall, and returned to College Park the following spring.

In August, 1912, he participated in the Regular Army and National Guard Maneuvers in the States of New York and Connecticut, and established several aeronautical records. On June 1st of that year, he established a new altitude record when he piloted a Burgess-Wright airplane to 6,540 feet.

During the latter part of 1912, General Arnold was on duty at Fort Riley, Kansas, observing field artillery firing from an airplane. He was the first military aviator to make use of radio to report his observations. His next assignment was in the Office of the Chief Signal Officer in Washington, and from there he was transferred to the newly established Aviation School at San Diego, Calif., where he served for nearly a year in the capacity of Supply Officer.

Early in 1917, General Arnold organized and commanded the 7th Aero Squadron in the Panama Canal Zone. In April of that year, following America's entry in the World War, he was assigned to duty in Washington and placed in charge of the Information Service of the Aviation Division of the Signal Corps. Upon the creation of the Office of the Director of Military Aeronautics, he was assigned to duty as Assistant Executive. In February, 1918, he was appointed Executive Officer and later as Assistant Director of Military Aeronautics, a position which placed him in direct charge of over thirty flying schools, some 15,000 Air Corps officers and 125,000 enlisted men.

During the early part of 1918, he went overseas on an inspection tour of avia-

tion activities. From 1919 to 1924 he was stationed on the Pacific Coast, the positions he held during that period being District Commander, Western District; Commanding Officer, Rockwell Field, Coronado, Calif.; Air Officer, 9th Corps Area, and Commanding Officer of Crissy Field, Presidio of San Francisco, Calif.

It was during General Arnold's period of duty on the Pacific Coast that a number of very important Air Corps activities were initiated, such as the aerial patrol of the forested areas in California and the Great Northwest, and the refueling duration and distance flights of Captain Lowell H. Smith (subsequently leader of the Air Corps Around-the-World Flight) and Captain John P. Richter.

Following the completion of his course of study at the Army Industrial College, General Arnold, early in 1925, was assigned to duty as Chief of the Information Division, Office of the Chief of the Air Corps, Washington. Transferred to Marshall Field, Fort Riley, Kansas, in March, 1926, he was in command of Air Corps troops at that field until the summer of 1928, when he was assigned to duty as student at the Command and General Staff School at Fort Leavenworth, Kansas. Following his graduation in June, 1929, he was assigned to duty as Commanding Officer of the Fairfield, Ohio, Air Depot also as Chief of the Field Service Section, Materiel Division, Wright Field, Dayton, Ohio. On July 1, 1930, he was appointed Executive Officer of the Materiel Division.

In November, 1931, General Arnold assumed command of the First Bombardment Wing at March Field, Riverside, Calif., the largest tactical unit in the West. In 1933, when the First Pursuit Wing was formed to replace the First Bombardment Wing, he assumed command of the new organization.

When President Roosevelt ordered the establishment of the Civilian Conservation Corps, March Field was chosen as one of the large concentration points in this program of utilizing a quarter of a million men for various projects looking to the conservation of the natural resources of this country, and General Arnold was appointed commanding officer of 25 camps.

In the operation of the Air Mail by the Army Air Corps, from February, 1934, to the following May, General Arnold was assigned as Officer in Charge of the Western Zone. This was a much more difficult task than his first assignment in connection with air mail operations, when, in September, 1911, he carried the first air mail in the United States from Nassau Boulevard Airdrome, Long Island, to Hempstead, Long Island, a distance of five miles.

In 1918, when the United States inaugurated the first regular scheduled air

mail operation in the world, General Arnold was in direct charge of this activity as part of his duties as Assistant Director of Military Aeronautics.

For his leadership of the flight of ten B-10 Bombing planes from Washington, D.C., to Fairbanks, Alaska, and return, July 19th to August 20, 1934, General Arnold was awarded the Mackay Trophy for the second time in his career as an Army flyer.

On March 1, 1935, General Arnold was assigned as Commanding Officer of the 1st Wing (West Coast) of the General Headquarters Air Force, with headquarters at March Field, and was given the temporary rank of Brigadier-General during the period of this assignment.

General Arnold has the distinction of being one of a few remaining officers in the Air Corps holding the rating known as "Military Aviator." In addition, he holds Expert Aviator Certificate No. 4, and Pilot License No. 29.

---000---

AVIATION PREPAREDNESS PARAMOUNT NEED

In an address of welcome to the First National Intercollegiate Flying Conference held in Washington on April 2nd and 3rd, last, Brigadier-General James E. Chaney, Air Corps, asserting that he considered this conference a most important milestone in the advancement of aviation in the United States, added that the Army Air Corps stands squarely and enthusiastically behind the development of our aviation, whether military, commercial, or sport. "Each of them," he stated, "contributes both directly and indirectly to the advancement of the others and, in so doing, all contribute to our national defense.

Our traditional military policy has been to maintain in peace time a small but highly trained Regular Army, which therefore must be greatly expanded in a major national emergency. The result is that the aviation component of our Army, as it exists today, must also be greatly expanded in a national emergency. That is where commercial and civilian aviation come into the picture and their development, advancement and encouragement in peace time are of the greatest concern to the Air Corps and to the War Department.

A country strong in civil aviation is potentially strong in military aviation. A nation strong in military aviation enjoys a national security that it cannot obtain in any other way, for a strong aviation, by its very existence and its power to retaliate in kind, is the greatest guarantee against demoralizing air attacks upon the great centers of civilian population.

Not only will your organization contribute to our national aviation strength, but also, in the future, from your organization will come the leaders in military, commercial and civilian aviation."

THE NEW AIR CORPS ENGINEERING SCHOOL CLASS

Special Orders of the War Department, recently issued, designated ten Air Corps officers for duty as students at the Engineering School at Wright Field, Dayton, Ohio, for the 1935-1936 course. The officers named below are under orders to report to the Commandant of the Engineering School not later than August 1st, next, viz:

Captain James B. Burwell, Kelly Field, Texas
1st Lt. Frederick R. Dent, Jr., and 1st Lt. Marshall S. Roth, Randolph Field, Texas.
1st Lt. William L. Scott, Jr., Langley Field, Va.

1st Lt. Paul E. Shanahan, Middletown, Pa. Air Depot.

1st Lt. Ralph T. Swofford, Jr., Panama Canal Department. (relieved from temporary rank upon departure from his station).

1st Lt. William T. Colman, Philippines.

2nd Lt. Howard M. McCoy, Selfridge Field.

2nd Lt. Charles K. Moore, San Antonio Air Depot, Duncan Field, Texas.

2nd Lt. Edwin S. Ferrin, March Field, Calif.

Captain Burwell is relieved from his temporary rank, effective July 29, 1935.

---oOo---

ASSIGNMENT OF TACTICAL SCHOOL GRADUATES

Effective upon the completion of their present course of instruction at the Air Corps Tactical School at Maxwell Field, Ala., the Air Corps officers named below have been assigned to stations, as follows:

To Barksdale Field, La.: Captains Lester J. Maitland, Milo McCune, 1st Lieut. Robert W. Douglass, Jr., 2nd Lieut. Reuben C. Hood, Jr.

To Brooks Field, Texas: Captain Horace S. Kenyon, Jr.

To Hamilton Field, Calif.: Captain Oliver K. Robbins.

To Maxwell Field, Ala.: Captains Ray L. Owens, Samuel C. Skemp, latter officer for duty as a member of the Air Corps Board.

To Mitchel Field, N.Y.: Major Vernon L. Burge, Captain Evers Abbey, 1st Lieut. William A. Matheny.

To Kelly Field, Texas: Captain Clarence E. Crumrine.

To Langley Field, Va.: Captain Ned Schramm.

To Office of the Chief of the Air Corps, Washington, D.C.: Captain Alvan C. Kincaid.

To Selfridge Field, Mich.: 1st Lieut. Robert C. Oliver.

To Wright Field, Ohio: Captains Thomas H. Chapman, Emile T. Kennedy, Rudolph W. Probst, John P. Richter, Stanley U. Umstead.

To Chanute Field, Ill.: 1st Lieut. Donald W. Norwood, for duty as instructor at Air Corps Technical School.

To Barksdale Field, La.: Captain William N. Amis.

To Columbus, Ohio, for duty with Air Corps at Headquarters, Fifth Corps Area: Major William B. Wright, Jr.

NEW INSTRUCTORS AT AIR CORPS TECHNICAL SCHOOL

Five Air Corps officers, under Special Orders of the War Department recently issued, were assigned to duty as instructors at the Air Corps Technical School at Chanute Field, Pantou, Ill., viz: Captain Oscar F. Carlson, now on duty at the Hawaiian Air Depot; 1st Lieut. Forrest G. Allen, Instructor at the Signal School at Fort Monmouth, N.J., and 2nd Lieuts. Gordon A. Blake, Ivan L. Farman and Charles W. Haas, students at the Signal School.

Captain Carlson is relieved from his temporary advanced rank effective upon his departure from Hawaii.

---oOo---

CHANGE IN SECOND BOMBARDMENT GROUP COMMANDERS

Effective April 1st, Lieut.-Colonel Willis H. Hale, Air Corps, was relieved from duty as Group Commander of the Second Bombardment Group, Langley Field, Va., and assigned the day following as Executive and Operations Officer of the Second Wing at that station.

Effective April 2nd, Major Charles B. Oldfield, Air Corps, was assigned to duty as Group Commander of the Second Bombardment Group, with the temporary rank of Lieut.-Colonel during the period of this assignment.

---oOo---

GRADUATES OF COMMAND AND STAFF SCHOOL ASSIGNED

Effective upon the completion of the present course of instruction at the Command and General Staff School, Fort Leavenworth, Kansas, the following-named Air Corps officers are assigned to stations, as follows:

Captain Lowell H. Smith to Mitchel Field, N.Y.

Captain John R. Morgan and Major William O. Butler to Randolph Field, Texas, the latter to take the course in heavier-than-air flying at the Primary Flying School.

1st Lieut. Kenneth N. Walker to Hamilton Field, Calif.

---oOo---

TEMPORARY PROMOTION OF AIR CORPS OFFICERS

Effective March 29, 1935, the following-named Air Corps officers on duty with the 19th Composite Group, Panama Canal Zone, were assigned to the duties indicated, with temporary increased rank, as follows:

Captain William B. Mayer, Supply Officer, to rank of Major.

First Lieuts. Lindsay M. Bawsel, Intelligence and Communications Officer, and James H. Wallace, Assistant Operations Officer, to Captain.

Air Corps officers on duty at the Air Depot in the Panama Canal Department received advanced rank, effective March 30, 1935, as follows:

First Lieuts. Cornelius W. Cousland, Adjutant, and Henry R. Baxter, Engineering Officer, the rank of Captain; 2nd Lieut. Daniel F. Callahan, Jr., Chief Inspector, the rank of First Lieutenant.

It is contemplated publishing from time to time biographical sketches of Air Corps officers as one of the regular features of the News Letter. At the present time it is thought particularly timely to touch upon the careers of Captains Albert W. Stevens and Orvil A. Anderson, Air Corps.

Anticipating that they will be called upon to take part in the forthcoming Stratosphere Flight, sponsored jointly by the National Geographic Society and the Army Air Corps and scheduled to take place next June, these two officers are now hard at work at the Air Corps Materiel Division, Wright Field, Dayton, Ohio, making careful preparations to insure the success of this year's attempt to penetrate the upper air strata to the utmost possible extent.

It will be recalled that Major William E. Kepner, pilot; Captain Orvil A. Anderson, Alternate Pilot and Scientific Observer, and Captain Albert W. Stevens, Scientific Observer, participated in last year's Stratosphere Flight, which terminated abruptly due to the rupture of the fabric of the big balloon, making it necessary for all three of these officers to resort to their parachutes. It is definitely known that Major Kepner will not participate in the forthcoming flight, due to the nature of the duties he is now performing.

CAPTAIN STEVENS

Captain Stevens, one of the foremost aerial photographers in the military service and one of its most hard-working individuals, was born at Belfast, Maine, March 13, 1886. He received the degrees of B.S. and M.S. at the University of Maine.

Enlisting in the Aviation Section, Signal Corps, in January, 1918, he was commissioned a 1st Lieutenant in that branch of the service on February 15, 1918, and was assigned to duty as a student at the School of Aerial Photography at Cornell University, Ithaca, New York.

Upon graduation from this school, he was assigned to duty overseas and placed in command of the 6th Photo Section, in which capacity he displayed exceptional ability flying over the enemy lines and taking aerial photographs of enemy positions. For this work he received two citations commending him for exceptional devotion to duty.

While overseas, he completed all the training necessary for a qualified Bombardment Observer, and he served in that capacity in bombing raids in enemy territory. Shortly before the signing of the Armistice he was appointed Chief Photographic Officer of the Air Service, First Army.

Captain Stevens, while on duty with the 88th Aero Squadron in the Chateau Thierry Sector, volunteered for and accomplished several particularly danger-

ous and important missions over the enemy lines. He produced among the best aerial oblique photographs made in the United States Air Service, one of his accomplishments being a series of oblique photographs of important points in the area fought over by the First American Army.

He was promoted to the rank of Captain, February 21, 1919.

Upon returning to the United States in August, 1919, Captain Stevens was temporarily assigned to duty in the Office of the Chief of Air Service, following which he served for a short time at Langley Field, Va. Most of his service since the close of the War has been at the Engineering Division of the Air Corps, first at McCook Field, and later at Wright Field, Dayton, Ohio, where he has been engaged in experimental aerial photographic work.

Captain Stevens performed numerous photographic missions in various sections of the United States and has taken aerial photographs of vast stretches of territory. One of the notable photographic missions in his Army career was the taking of aerial photographs of the National Parks in the Great Northwest.

By special permission of the War Department, he accompanied Dr. Hamilton Rice on the latter's exploration tour along the Amazon River in South America during the latter part of 1924 and the early part of 1925.

One of the startling feats performed by him was a parachute jump from a supercharged Martin Bomber flying at an altitude of 24,206 feet, on June 12, 1922.

With Lieut. John A. Macready as pilot of a supercharged Le Pere airplane, which on May 2, 1924, ascended above Dayton to an altitude of 31,540 feet, or nearly six miles, Captain Stevens photographed the greatest area ever included up to that time in a single exposure. Nineteen square miles, covering almost the whole city of Dayton, were shown in the photograph with remarkable clearness, the river, streets, parks and outstanding buildings being easily spotted.

For the best record and performance in connection with flying during the year 1929, Captain Stevens was awarded the Mackay Trophy. On February 27th of that year, with Lieut. Harry A. Johnson as pilot, he made complete and accurate notes of the engineering and meteorological features of an altitude flight to 35,611 feet, a record at that time for a biplane airplane. This data proved of great value to the Air Corps Engineering Division.

On March 3, 1929, on the eve of the inauguration of President Hoover, Captain Stevens, in a standard observation airplane piloted by Lieut. John D. Corkille, made night photographs of the Capitol and

the White House at Washington, D.C. Undaunted by several mishaps earlier in the evening, the pair of flyers kept at work until 10:45, and their efforts were successful. The negatives of the photographs taken were dropped immediately after exposure, picked up by Air Corps officers, and telephotoed to all points of the country.

The climax of his photographic activities in 1929 came when, on a 14000-mile aerial photographic tour of the Northwest, he made a photograph of Mt. Rainier from a distance of 227 miles. Piloted again by Lieut. Corkille, the two spent several months in the summer taking some of the most beautiful scenic photographs ever made. Taking off on August 13th from Eugene, Oregon, and flying over a point well south in Oregon, Captain Stevens, although unable to see with his own eyes many of the mountain ranges and peaks he hoped to include in the long-distance photograph, made careful calculations with the aid of his compass and, pointing his camera in the direction of Mt. Rainier, made the exposure. The result was remarkable, for in the 227-mile picture, not only is Mt. Rainier clearly seen, but also other notable mountain peaks in that region.

In January, 1932, during the course of photographic work performed by the Air Corps for the U.S. Coast and Geodetic Survey, Captain Stevens eclipsed his previous achievement in long-distance aerial photography when, from an altitude of 23,000 feet, from a position 8 miles east of Salinas, Calif., he made a photograph of Mt. Shasta, Calif., a distance of 331.2 miles from the locality where the plane was flying.

Captain Stevens' exploits are numerous. He usually participates in all the principal aerial photographic undertakings initiated by the Air Corps.

In August, 1932, during the eclipse of the sun, Captain Stevens, piloted by Lieut. Charles D. McAllister, made some remarkable photographs of that phenomena and, in addition, contributed valuable data in connection with research work on the cosmic ray.

In 1934, Captain Stevens was awarded the Distinguished Flying Cross for extraordinary achievement while participating in aerial flight. He was a scientific observer of the National Geographic Society-Army Air Corps Stratosphere Balloon Flight, which took off from the vicinity of Rapid City, South Dakota, July 28, 1934, and landed near Loomis, Nebraska, that same day. He assisted in piloting the balloon to an altitude of 60,613 feet, and in making continuous scientific observations enroute. When the balloon became disabled, through circumstances beyond human control, Captain Stevens did attempt, under most adverse and hazardous

conditions, to land successfully the disabled aircraft in order to preserve the scientific records that had been obtained. By the exercise of cool judgment and foresight under these conditions, certain scientific records were saved, and the disabled aircraft was abandoned only when it was clearly evident that not to do so would prove disastrous to human life.

In being forced to abandon the disabled balloon and resorting to his parachute, Captain Stevens became a member of the mythical Caterpillar Club.

CAPTAIN ANDERSON

Captain Orvil A. Anderson is one of a limited number of officers in the Army Air Corps who holds four flying ratings, these being "Airplane Pilot," "Airship Pilot," "Airplane Observer," and "Balloon Observer."

Born at Springville, Utah, May 2, 1895, Captain Anderson attended grammar school high school and college preparatory school in that city, and was a student for one year at the Brigham Young University.

Enlisting in the Aviation Section, Signal Corps, during the War, he served for several months with the 129th Aero Squadron at Kelly Field, Texas, and, in October, 1917, he was transferred to the First Balloon School Squadron at Fort Omaha, Nebraska, where he pursued the course of instruction in ballooning.

From March 22 to May 11, 1918, he took the ground school course at the School of Military Aeronautics, Ohio State University, Columbus, Ohio, and then returned to Fort Omaha, where he completed the course of instruction in Observation, lighter-than-air. He was rated a "Balloon Observer," July 24, 1918; commissioned a 2nd Lieutenant, Aviation Section, Signal Corps, August 23, 1918, and assigned to duty with the 59th Balloon Squadron, Fort Omaha, as Supply Officer and Mess Officer. On January 29, 1919, he was placed in command of the 61st Balloon Company.

Transferred to duty with the 34th Balloon Company at Langley Field, Va., in April, 1919, Captain Anderson completed the course of instruction in airship piloting, and was rated "Airship Pilot," September 1, 1920. During the year 1920, he completed a course of instruction in aerial navigation at the Naval Navigation School at Pensacola, Fla.

In 1922, Captain Anderson was transferred to the Balloon and Airship School at Scott Field, Ill., where he was on duty as Instructor in Terrestrial and Celestial Navigation. In that year he was commended on two occasions by the Chief of the Air Corps for exceptional service; in the first instance for the

creditable manner, in which he performed his duties as a member of the crew of the Airship C-2 on its round trip transcontinental flight and, in the second instance, for his skill and courage in successfully landing, with but minor damage, and with no injury to any member of the crew, a pony blimp during the course of a flight from Scott Field to Bynum, Ala. Unable to land the blimp due to unforeseen high wind and motor failure, Captain Anderson successfully effected a rip landing.

Early in 1923, Captain Anderson completed a course in rigid airship training at the Naval Air Station at Lakehurst, N.J.

In 1925, he completed the course in heavier-than-air training at the Primary Flying School at Brooks Field, Texas, and the Advanced Flying School at Kelly Field, San Antonio, Texas, and on Sept. 14th of that year was rated "Airplane Pilot" and "Airplane Observer."

Following his graduation from the Advanced Flying School, Captain Anderson was on duty at this School for several months as Commandant of Cadets, Flying Instructor and Instructor in Observation. He then returned to Scott Field, Ill., for temporary duty for several months. Being due for foreign service, Captain Anderson was transferred to the Philippines and, upon the expiration of his tour in the Islands, he returned to Kelly Field, his present station.

In the latter part of 1933, Captain Anderson was on temporary duty at Langley Field, Va., where he pursued an advanced course in air navigation. He remained at Langley Field for a brief period as an instructor in that subject. In June, 1934, he was assigned as pilot and observer of the National Geographic Society-Army Air Corps Stratosphere Balloon Flight, which took off from the vicinity of Rapid City, South Dakota, July 28, 1934, and landed near Loomis, Nebraska, that same day. He assisted in piloting the balloon to an altitude of 60,613 feet, and in making continuous scientific observations enroute, and when the balloon became disabled through circumstances beyond human control, did attempt, under most adverse and hazardous conditions, to land successfully the disabled aircraft in order to preserve the scientific records that had been obtained. By the exercise of cool judgment and foresight under these conditions, certain scientific records were saved, and the disabled aircraft was abandoned only when it was clearly evident that not to do so would prove disastrous to human life.

In being forced to abandon the disabled balloon and to resort to the use of his parachute, Captain Anderson became a member of the mythical Caterpillar Club.

AERIAL REVIEW AT SAN ANTONIO ON ARMY DAY

Characterized by the local newspapers as "the greatest military demonstration in the history of San Antonio," Army Day at the Alamo City saw an aerial display in which approximately 150 planes were utilized, followed by a parade of all units of the Second Division from Fort Sam Houston.

Major John K. Cannon, Director of Training at the Air Corps Training Center, was in charge of the Aerial Review in which there were planes from Kelly, Randolph and Brooks Fields. The planes were flown at four different altitudes, with Randolph Field's "USA" formation at the top altitude of 4,500 feet. This same formation was flown during the filming of "The West Point of the Air." Kelly Field planes were flown at 4,000 feet, and those from Brooks Field at 3,000 feet. The flying started at 9:30 a.m.

Kelly and Randolph Fields each dispatched 12 planes on Friday night, April 5th, to give a demonstration of night flying over the city.

---oOo---

DEATH OF JIMMY COLLINS MOURNED

With the information that Jimmie Collins' brilliant career as a pilot had come to a sad finish, many Kelly Field officers recalled the likeable "Jimmie" to mind when he was a classmate of Col. Charles A. Lindbergh, then a Flying Cadet at Kelly Field in the advanced class of September, 1924, both crack pilots graduating on March 14, 1925. Collins specialized in Pursuit at the Advanced Flying School.

Collins, whose specialty had been terminal velocity dives from 20,000 feet, was killed on March 22nd, when his plane during one of those dives crashed near Farmingdale, L.I., New York. He had been testing Navy planes for several days.

It was back in December, 1928, when Collins was making a test flight for the Navy and attempting a vertical dive from 11,500 feet that structural failure of the plane made him a member of the Caterpillar Club.

---oOo---

REVIEW FOR RETIRED NONCOMMISSIONED OFFICERS

The entire personnel of Kelly Field participated in a Review on March 30th in honor of Master Sergeant Ernest Cote, 40th Attack Squadron, Air Corps, who was retired after 30 years' honorable service in the Army. His Squadron staged a turkey dinner in his honor.

Master Sgt. Cote, who will make San Antonio his home, enlisted in the Army in December, 1903. He served four years in the Coast Artillery, following which he

V-6766, A.C.

transferred to the Signal Corps. In November, 1913, he affiliated himself with the Aviation Section of the Signal Corps, and he has been with the Army's Air Forces ever since. His service includes an assignment to the 1st Aero Squadron, organized twenty years ago, and commanded by Captain Benjamin D. Foulois, now Major General and Chief of the Air Corps.

Through one of those coincidences which happen now and then, General Foulois was present at Kelly Field on a tour of inspection when the ceremonies incident to the retirement of Master Sergeant Cote took place, and they had a chat over old times. The General congratulated the latter upon his well earned retirement.

---oOo---

THE FIRST WING'S FIRST CONCENTRATION

The first tangible evidence of the formation of the new 1st Wing of the GHQ Air Force appeared on March 22nd, when the new Wing held its first concentration at Hamilton Field, Calif.

Brigadier-General Henry H. Arnold, the Wing Commander, devised a communication problem, combined with a bombardment concentration with accompanying Pursuit protection, with Hamilton Field as the objective. Fifty-one planes of the 17th Attack Group, 12 Bombardment planes of the 19th Bombardment Group at Rockwell Field joined forces with 13 Martin Bombers of the 7th Bombardment Group at Hamilton Field to complete the Wing force as it is now equipped. The communications feature of the problem involved intercommunication between the three Groups as they moved up the coast, employing radio voice.

---oOo---

POST EXCHANGE ADDITION TO RANDOLPH FIELD

For the consideration of \$1.00, the Randolph Field Post Exchange is deeding to the Government a new \$7,000 building, which was erected to house the new post exchange concession for auto parts, servicing of cars, and wash rack. Being isolated from San Antonio by 18 miles, this new service to the post personnel fulfills a long felt want.

The Post Exchange Council originally provided an expenditure of \$4,000 to erect a building, under the direction of the Constructing Quartermaster. By the time the building was ready for occupancy, however, the Post Exchange found that it had invested in the neighborhood of \$7,000.

The building is designed so as to harmonize with the general architectural scheme of the post and, unlike most buildings used for this purpose, it is an attractive addition instead of an eyesore.

---oOo---

MACKAY TROPHY PRESENTED GENERAL ARNOLD

On April 9th, cloudy, chilly and rainy, a day which brought memories of one 22 years ago (October 9, 1912) on which he made a 41-minute reconnaissance flight from College Park, Md., to Washington Barracks, D.C.; Fort Myer, Va., and return to College Park, and thereby earned the first award of the Mackay Trophy, Brigadier-General Henry H. Arnold, Air Corps, was for the second time in his Army career awarded this Trophy for his leadership of the flight of ten B-10 Martin Bombers from Washington, D.C., to Fairbanks, Alaska, and return, during July and August, 1934.

Due to the absence of Senator William G. McAdoo, President of the National Aeronautic Association, Major James H. Doolittle, Vice President of the Association, flew to Washington from New York in weather which kept most birdmen on the ground, and presented the Mackay Trophy and the gold medal to General Arnold. Because of the inclement weather, the presentation ceremonies were held inside one of the Bolling Field hangars in the presence of a guard of honor, Brigadier-General Oscar Westover, Assistant Chief of the Air Corps; Lieut.-Col. Barton K. Yount; Lieut.-Col. John D. Reardan and Captain E.E. Hildreth, of the Information Division, Office of the Chief of the Air Corps; Captain Charles M. Savage, Acting Commanding Officer of Bolling Field, and other commissioned personnel of the field; Messrs. Wm. Emyart and Ray Cooper, of the National Aeronautic Association, and two representatives of Mr. Clarence H. Mackay, donor of the Trophy.

In turning over the Mackay Trophy to General Westover, who accepted it on behalf of the War Department and made a brief reference regarding its history, and then pinning the gold medal on General Arnold, Major Doolittle said that aviation is not entirely a young man's game any longer and showed that military aviation units should be entrusted to the command of able, experienced flying officers.

General Arnold, in a brief speech of acceptance, recalled incidents connected with his first trophy-winning flight. Dressed in ordinary clothing, not being provided with flying clothes, sitting in the unprotected seat of the early Wright machine and fully exposed to the elements, he said that he had undergone more hardship on this flight than during the entire Alaskan flight of the past summer. He added that when he landed at College Park he was so cold that he could hardly move, and he was carried to the hospital.

General Arnold was present in Washington to testify before a Congressional Committee, and it seems that the presentation ceremony was well timed.

V-6766, A.C.

MATERIEL DIVISION
ENGINEERING NEWS

ENGINEERING SECTION
Equipment Activities:

Instrument Landing Equipment: Parts for the fabrication of Air Corps radio compass locators for the Department of Commerce are on order; fabrication of Air Corps marker beacon projectors for the Department of Commerce has been started. This work is being accomplished at the Materiel Division.

Mounting brackets have been prepared for installing instrument landing equipment in the first instrument landing truck. Drawings are being prepared to accomplish this work in other instrument landing trucks.

Aerial Photographic Equipment.- A representative of the Materiel Division made a tour of the East recently in connection with obtaining aerial photographic data. He visited the Eastman Kodak Company and the Folmer Graflex Corporation, Rochester, N.Y., and obtained engineering data for preparations for Types C-1 and C-2 cameras; the Akeley Camera, Inc., New York City, and obtained data for preparation of specification for Type A-1 camera; the Fairchild Aerial Camera Corporation, Woodside, Long Island, N.Y., re changes necessary on Type K-7C camera recommended by Air Corps photographic activities as result of service test; and Mitchell Field re installation of drying cabinets in Type A-1 dryer. He also visited the Philadelphia Air Transport Company, Norristown, Pa., and examined an experimental automatic film dryer developed by that company. A practical demonstration was made; the dryer seems quite promising. An effort will be made to obtain one of these dryers for experimental test at the Materiel Division.

MATERIALS BRANCH

The Air Corps completed a service test on the comparison of "International Orange" and Yellow No. 4. The former is recommended by the Aeronautics Branch of the Department of Commerce, in Aeronautics Bulletin Nos. 4 and 9, "Regulations Governing Establishment and Certification of Artificial Lights and Recommended Standards for Marking Obstructions to Air Navigation," July 1, 1932, and the latter in Supplement No. 3-1 to U.S. Army Specification.

Tests were made at Randolph Field. The two-color finishes were applied to airplanes, which were viewed from above, when at rest, and while taxiing, when in flight against a clear sky, and against clouds. Recommendations were made for aluminum and black, which might be a desirable combination in case protective coatings were discontinued on metal-covered airplanes.

Air Corps "Gigolo."

Vibration tests on the new Materiel Division motor mount are now being conducted. For these tests it is not necessary to run the engine, the vibration being set up by a "Gigolo." A "Gigolo" is defined unofficially in static test circles as "a dancing device which excites response in the body to which it is attached." A further advantage of using a "Gigolo" lies in the fact that the engine under test is cool, is not turning a propeller, and consequently can be observed, felt, and vibration recording instruments applied to any part.

Armament Activities:

Design work is being accomplished in connection with the development of a bomb rack assembly intended for use in Pursuit type airplanes. The rack assembly will be electrically operated and utilized under all conditions of maneuvers approved for this type airplane. The mechanism is being designed in units for each bomb with the idea that units corresponding to the number of bombs required can be installed.

Work is being continued in connection with the development of an adapter assembly for use in mounting two caliber .30 machine guns flexibly. Recent tests of the most promising design have been attended with highly satisfactory results.

FIELD SERVICE SECTION NOTES

Flexible Gun Mounts Requested.

Inquiries were received from both the Artillery and Mechanized Cavalry in regard to the availability of flexible gun mounts against antiaircraft. These arms have been informed that approximately 800 each of the Type A scarf mounts are available from Air Corps stores without transfer of funds, except actual cost of packing, handling and transportation.

While this type of mount is obsolescent for Air Corps use, it appears to be suitable for the above purpose.

Stock List Prepared.

The Materiel Division has just completed a project begun several years ago, that of preparing a complete list of all the items of equipment and supplies stocked by the Air Corps. This "Stock List" has been published in sectional form, a separate section for each class of property. The individual parts of the list will be republished annually to bring them up to date.

This work is one of the most important projects the Field Service Section has attempted since, through this stock list, it has been possible to standardize Air Corps property nomenclature, fix the classification of each item, and to dis-

pose of surplus and obsolete stock. A great quantity of material has been made available for sale and the shelves of the depots and stations consequently cleared of a large amount of inactive material. The reports received in the Materiel Division from all Air Corps stations and depots have been rendered intelligible through the standardization of nomenclature so that the exact location of all property is now known with the result that considerable saving in expenditures for new material is made possible by the utilization of existing stocks.

---oOo---

GENERAL SIMONDS VISITS AIR CORPS POSTS

Among recent visitors at the Air Corps Tactical School, Maxwell Field, Ala., was Major-General George S. Simonds, Deputy Chief of Staff, who arrived at this station from Pope Field, Fort Bragg, N.C.

The General and 1st Lieut. C.K. Gailey, Jr., his aide, were passengers in a C-4A airplane piloted by Captain Hez McClellan, Air Corps. After an overnight stop at Maxwell Field, the flight was continued to Kelly Field, via New Orleans, La.

General Simonds, upon arrival at San Antonio, made a tour of inspection of both Kelly and Randolph Fields in order to familiarize himself with the organization and operation of the Air Corps Training Center.

Major-General B. D. Foulis, accompanied by Captain Harry A. Halverson, also on a tour of inspection of Air Corps posts, and who was in San Antonio at that time, accompanied General Simonds on his tour of the San Antonio fields.

---oOo---

COOPERATION WITH ANTI-AIRCRAFT

The 63rd Anti-Aircraft Regiment from Fort MacArthur, Calif., is now temporarily encamped at March Field, Calif., for searchlight drill. The 17th Attack Group is flying missions to give them actual airplane targets. Missions are flown for three hours each night at an altitude of 10,000 feet.

In addition to the drill this provides the anti-aircraft personnel, March Field pilots are also using the illuminated airplane for a target to determine the possibility of using anti-aircraft searchlights to illuminate enemy planes in warfare and as to whether our own Pursuit can fire on the illuminated targets without being seen themselves or becoming confused by the lights.

---oOo---

John Trenum, famous Danish parachute jumper, about to make a delayed jump recently from 30,000 feet, died of heart failure resulting from nerve strain when the plane reached 27,000 feet.

BILL ON PASSIVE DEFENSE FOR FRANCE

Concerning the proposed bill organizing passive defense in France, a report thereon, prepared by M. Gustave Guerin, of the Chamber of Deputies, is briefly as follows:

During the war, aviation was used first in cooperation with the Army and Navy, and later as a new arm, somewhat independent. There were 28 attacks against Paris, during which 25 tons of bombs were dropped.

After the war, aerial danger was so remote that the subject was dropped in France for several years. But this danger exists and is very grave, all the more so as attacks will come either suddenly, or after a very short period of political tension. Theories adopted in foreign countries leave no doubt as to the capital role of aviation in a new conflict and it is even stated that definite results may be obtained by aviation the first days of a war. To this end, aviation will attack objectives of all kinds, if judged important; military, economic and moral; and will use all available means: explosives, incendiary bombs and gas.

International conventions have been drawn up, but it is impossible to stop the manufacture of certain chemicals which, while used in gas warfare, are also important in the chemical, dye and fertilizer industries.

Douhet was in favor of a sudden attack with all available means, without declaration of war. These views are also popular in Germany. Hence, it must be admitted that aviation will attack any objective, with all available means, and will carry its attacks all over the territory of a nation.

This means a real danger for civilian populations and adequate measures must be adopted, especially in a country like France, which will always not only avoid but even appear to plan a brusque aggression. This renders France more vulnerable.

Red Cross societies have already devoted their efforts to this question of passive defense, and attempted in numerous meetings to define measures capable of counteracting a bombardment by air. In most European countries, passive defense has been organized. France is slow in this respect.

Studies were carried out and rules laid down. In the instructions of the Ministry of the Interior there are shown the respective duties and responsibilities of the various authorities.

Certain measures have been considered in detail since that time by the High Committee on Passive Defense, an advisory body of the Ministry of the Interior. The general organization of passive defense has thus been contemplated

V-6766, A.C.

but cannot be enforced as long as it is not compulsory to abide by the Ministry of the Interior's instructions in the matter. This must be made compulsory by law.

The financial aspect of the question is a delicate one. The High Committee on Passive Defense of the Ministry of the Interior agreed that it was desirable that expenses incurred for passive defense against air attacks should rest on the beneficiaries: administrations, public services, departments, towns, associations and individuals, the Government contributing certain sums only in exceptional cases in the general interest of the nation or in consideration of the particular situation of those concerned.

To be efficient in time of emergency, passive defense must have trained personnel in time of peace, composed of departmental and municipal services to which civilian volunteers will be added. This personnel should be insured against accidents in time of peace as well as against accidents in time of war.

The preparation of passive defense creates new obligations which a law alone can define.

It is also indispensable to give special authority to the Ministry of the Interior to impose certain dispositions, either in the lay-out of towns or construction of buildings, with a view to passive defense.

The above items are the basic principles of the proposed bill on passive defense.

The Chamber of Deputies' Commission did not feel that all expenses should be borne by the interested parties, but only as far as their financial situation would permit; instead of placing the mayors under the authority of the Government, the Commission desires them to act as collaborators. The Commission has amended the bill to that effect and recommends its passage as now drafted.

Article I of the bill makes the organization of passive defense against air danger compulsory over the entire territory.

Article 2 charges the Ministry of the Interior with directing, coordinating, and controlling the organization of passive defense, with the assistance of a High Committee on Passive Defense.

Article 3 shows the duties and responsibilities of public authorities and individual bodies in the preparation of passive defense. This defense in France is the responsibility of the ministries. However, passive defense of the populations is the responsibility.

Article 4 gives authority to the Ministry of the Interior to apply government directives and to enforce measures in connection with industrial decen-

tralization and the dispersion of populations. It also empowers it to increase, through pertinent measures, the capacity for defense of the various communities.

Article 5 provides personnel for passive defense and provision for regulations regarding their respective statutes.

Article 6 deals with the distribution of expenses.

Article 7 provides sanctions for those who do not respect the provisions of article 1 (obligation of passive defense) and article 3 (authorities preparing for it), listing measures which are strictly necessary, whose enforcement must be obtained by the prefects in case the mayors do not attend to it.

Article 8 provides for these exercises which will not perturb public life, only the regular personnel participating and only camouflaging of lights and interruption of circulation in centers where passive defense is being tested out being expected of the civilian populations.

Article 9 concerns administrative measures and provides that special provisions will be adopted for the region of Paris.

Article 10 extends the provisions of the law to the colonies.

Conclusions.

If we compare the situation in France to that in other countries, it must be admitted that France is slow in the organization of its passive defense. If, theoretically, everything has been provided for, practically the education of the population and preparatory measures have only been fractional and disconnected.

At the present time, according to the reaction of the mayors to passive defense, something is done or nothing at all. Hence, everything that must be ready beforehand must be made compulsory. This means that punishment is necessary, not only for responsible authorities, but also for private individuals.

As concerns expenses, certain communities have relied on the Government, but Marshal Petain himself declared that the entire fortune of the nation would not be enough to create an "ideal organization" of passive defense.

The Commission and the Government have prepared, in complete accord, a text which is now being submitted to the Chamber of Deputies and should be voted.

---oOo---

Attention is invited, in connection with the above proposed legislation, to quoted articles from two French dailies on passive defense against air attacks, which appeared on pages 137 and 138 of the April 1st issue of the News Letter.

---oOo---

A tailor living at Dalby, 200 miles from Brisbane, Australia, who is a licensed pilot, finds flying to his various customers quicker and cheaper. He hires a plane from a local flying club.

CHANGES OF STATION: To Maxwell Field, Ala.: Major Leslie MacDill, for duty as member of the Air Corps Board, upon completion of present course of instruction at Naval War College, Newport, R.I. - Captain Levi L. Beery, upon completion of tour of duty in Philippine Islands.

To Randolph Field, Texas: 1st Lieut. Ralph E. Holmes, from Crissy Field, for primary flying training, Class of July 1st - Captain James F. Powell, upon completion of present course of instruction at Army Industrial College, for primary flying training.

To Langley Field, Va.: Captains Robert Olds and Ralph H. Wooten, upon completion of present course of instruction at Command and General Staff School, Fort Leavenworth, Kans. - Lieut.-Colonel Walter R. Weaver for duty as Chief, Inspection Section, GHQ Air Force, from duty as Procurement Planning Representative, New York City.

To Washington, D.C.: Captain Thomas W. Blackburn, Instructor, 36th Division Aviation, Texas National Guard, Houston, for duty in Office of Chief of National Guard Bureau.

To Philadelphia, Pa.: Captain John M. McCulloch, as Instructor, 28th Division Air Corps, Pa. National Guard, upon completion of course of instruction at A.C. Tactical School.

To Governors Island, N.Y.: Colonel Frank P. Lahn, Military Attache, Paris, France, effective about Sept. 18, 1935, for duty with Air Corps at Hqrs. Second Corps Area.

To Wright Field, Dayton, Ohio: 1st Lieuts. Lawrence C. Craigie and George V. Holloman, upon completion of present course of instruction at Air Corps Engineering School.

To Fort Crockett, Texas: Colonel Theodore A. Baldwin, for duty in connection with recruiting. Previous orders revoked.

To Hawaiian Department: Major John C. McDonnell, upon completion of present course of instruction at Command and General Staff School, Fort Leavenworth, Kansas.

To New York City: Captain Clarence H. Welch, from Langley Field, for duty as Air Corps Procurement Planning Representative.

To Rockwell Air Depot, Calif.: Captain Reuben C. Moffatt, upon completion of present course of instruction at Air Corps Engineering School.

To Middletown, Pa. Air Depot: Captain Harrison G. Crocker and 1st Lieut. Russell E. Randall, upon completion of present course of instruction at Air Corps Engineering School.

To Fairfield, Ohio, Air Depot: 2nd Lieut. John W. Sessums, upon completion of present course of instruction at Engineering School.

To Paris, France: 1st Lieut. Townsend Griffis for duty as Asst. Military Attache for Air to Paris and Spain, from duty in the Office of Assistant Secretary of War.

To U.S. Military Academy, West Point, N.Y.: 1st Lieut. Leonard H. Rodieck, upon completion of present course of instruction at Air Corps Tactical School, Maxwell Field, Ala.

To Scott Field, Ill.: 1st Lieut. Gerald G. Johnson, upon completion tour of duty in the Philippines.

To Bolling Field, D.C.: Captain William E. Fairbairn from duty as Instructor at Command and General Staff School.

To Randolph Field, Texas: 1st Lieuts. Hoyt D. Williams and Jacob E. Smart, from Panama. Relieved from temporary rank effective upon date of departure for new assignment; - 1st Lieut. Uzal G. Ent, from Langley Field, to undergo primary flying training.

ORDERS REVOKED: Assignment of 1st Lieut. Fred A. Ingalls from Crissy Field to Fort Bragg, N.C. - Assignment of 1st Lieut. Alva L. Harvey from Langley Field to Philippines.

PROMOTIONS: to 1st Lieutenant: 2nd Lieut. Fred S. Stocks, rank March 9, 1935 - 2nd Lieut. Paul T. Cullen, rank from March 20, 1935.

RELIEVED FROM DETAIL TO AIR CORPS: 2nd Lieut. John J. Stark to 6th Coast Artillery, Fort Winfield Scott, Calif.

RETIREMENT: 1st Lieut. Robert M. Kraft from Letterman General Hospital to his home.

TRANSFERRED TO AIR CORPS: 2nd Lieuts. Paul R. Gowen, C.E.; Harry S. Bishop, C.A.C., David N. Crickette, F.A., and Samuel A. Mundell, Infantry, March 20, 1935, with rank from June 13, 1933.

RELIEVED OF TEMPORARY RANK: Major Dixon M. Allison, 24th Pursuit Squadron, and 1st Lieut. Jarred V. Crabb, 29th Pursuit Squadron, effective upon departure from Panama Canal Dept.

CHANGES OF STATION (Addl.): To Office of the Chief of the Air Corps: Major Michael F. Davis, from Hawaiian Department.

To Fort Leavenworth, Kansas: Captain Joseph A. Wilson, for duty with Air Corps Detachment, from duty with Organized Reserves, Richards Field, Kansas City, Mo.

To Randolph Field, Texas: 1st Lieut. Reginald R. Gillespie, from Langley Field, Va.

---oOo---

CHANGES IN ENLISTED PERSONNEL

Master Sergeant Ernest Cote, placed on the retired list at Kelly Field, Texas, March 31, 1935; First Sergeant Nathan W. Beacher was placed on retired list at Selfridge Field, Mich., same date. Master Sergeant George Stout died at Langley Field, Va., March 18, 1935.

Technical Sgt. Charles Gail was promoted to Master Sgt., March 22, 1935, to fill vacancy caused by death of Master Sgt. Stout. Sgt. Gail is stationed at Rockwell Field, Calif.

Technical Sgt. John Bollinger, Scott Field, Ill., was promoted Master Sergeant, April 1, 1935, to fill vacancy caused by retirement of Master Sgt. Cote.

Staff Sergeant James L. Coulbourn, Bolling Field, D.C., was promoted Technical Sergeant to fill vacancy caused by promotion of Technical Sergeant Gail.

Staff Sergeant George W. Riffil, Hawaiian Dept., was promoted Technical Sergeant to fill vacancy caused by promotion of Tech. Sgt. Bollinger. He was ordered to Scott Field, Ill.

V-6766, A.C.

THE DEVELOPMENT OF THE MEDICAL SPECIALTY, AVIATION MEDICINE, AND THE FLIGHT SURGEON
By Major M. C. Grow, Medical Corps, Acting Chief, Medical Division, A.C.

The medical specialty, Aviation Medicine, was an outgrowth of the World War. The early unfortunate experiences of the French, British and Italians with the attendant enormous loss of life and materiel not only in combat but even more so during the period during which the embryo flyer was receiving his training, disclosed the fact that every man was not physically or mentally equipped for military aviation.

It has been learned that the development of certain defects, or conditions which are ordinarily considered as unimportant when found among the personnel of other branches of the service, may render an airplane pilot wholly unfit for the piloting of military aircraft safely. Consequently, there has been evolved more or less gradually a different set of physical requirements for the military aviator.

The military aviator performs his missions in an environment entirely new to mankind. He moves through space at a tremendous rate of speed, and in moving, controls the position of his craft in three dimensions simultaneously. Furthermore, he must constantly make rather quick decisions, and these decisions must practically always be made accurately and correctly. The decisions which he makes depends, primarily and directly on his ability to perceive accurately; and secondarily, to make the proper interpretations of his perceptions.

The idea gradually evolved in the minds of the aviators at the front that there was a great and immediate need for a medical advisor to the commanding officer of the squadron whose duties were the maintenance of physical fitness of each individual aviator of the command. When the United States came into the World War the sad experiences of our Allies were recognized and the government fortunately took steps to avoid similar losses through lack of medical supervision.

It is worthy to note that many of the medical experts made the identical statement, "It is fortunate that the United States is realizing at the beginning that the essential need is for medical advisors whose duty it is to maintain the fitness of each individual aviator". Hence the flight surgeon arose from the demands put upon man by war-time aviation.

In August, 1917, the Chief Surgeon of the Aviation Section of the Signal Corps received detailed information from an officer of the Royal Flying Corps, giving data upon the marked nervous instability that developed among the fighting fliers at the front which

showed that nervous instability and breakdown was a greater factor in reducing efficiency than bullets.

A study of the effects of altitude on man by the British showed that this was a causative factor in reducing the fighting power of the squadron on the front. On September 17, 1917, a committee was designated by The Surgeon General of the U.S. Army, and submitted the following propositions:

1. That the present anti-aircraft guns of the Germans necessitate much flying in high altitudes, 16,000 to 20,000 feet.

2. That these altitudes cause such symptoms from "oxygen want" as to incapacitate men from service.

3. That acclimatization to these altitudes has not as yet succeeded.

4. That artificial oxygen supply is an absolute necessity to enable aviators to work in these altitudes.

5. That different individuals show marked differences in their capacity to withstand high altitudes and it is believed that it will be necessary to institute special examinations of all aviators to determine their ability for high altitude work."

In accordance with the above suggestion, recommendation was made September 26, 1917, by the Chief Surgeon to the Commanding General Air Division, "that a medical research board be appointed to consist of the following officers: Major John B. Watson, Signal Officers' Reserve Corps; and Major Eugene R. Lewis, Major William Wilmer, and Major Edward G. Seibert, all of the Medical Reserve Corps, to report to the Chief Surgeon, Aviation Section, Signal Corps.

After many difficulties a laboratory was established at Hazelhurst Field, Mineola, Long Island, N.Y., called the Medical Research Board of the Aviation Section of the Signal Corps.

In instructing future flight surgeons the first faculty at the Research Laboratory included the following in their curriculum:

1. Selection of the Flier.
2. Classification of the Flier.
3. Maintenance of efficiency.

At first associated with the flight surgeon in his work were physical directors who acted very much in the same capacity as a trained athlete. These physical instructors were later discontinued and the entire burden of the fliers' physical and mental well-being fell on the flight surgeon.

After the War, in 1919, the Regular Army flight surgeons school was established at Mitchel Field. In 1925, the school, now called The School of Aviation Medicine was removed to Brooks Field,

San Antonio, Texas. When the new West Point of the Air, Randolph Field, Texas, the training center of all prospective military aviators, was established in 1931, the school was moved to the new locality where it has continued to function as a teaching and research center in aviation medicine. A faculty of six members, all Regular Army Medical Corps officers and all qualified Flight Surgeons, give courses in physiology, psychology, psychiatry, cardiology, otology, ophthalmology, neurology, and other subjects in their especial relation to aviation medicine.

An extension course and six weeks' practical instruction is open to Medical Corps Reserve and National Guard Medical Officers. A total of 144 Regular Army Medical Corps officers, 129 Medical Corps Reserve, 14 National Guard Medical officers, 30 U.S. Navy officers, and 3 foreign officers have completed the courses and are rated as Flight Surgeons. It is estimated that the number of qualified flight surgeons required for M-Day in case of a national emergency is 945 of which a total of 700 should be Reserve officers.

At the present time 60% to 80% of aircraft accidents are due to pilot error. The errors of omission and commission thus cause a considerable loss of life and destruction of property and should inspire such constructive and preventive measures to improve the record. The trend of thought on the influence of proper medical supervision of aviation personnel is clearly indicated in the recommendations adopted by the Fifth International Congress on Aerial Navigation at the Hague in 1930, extracts from which follow:

"The Fifth International Congress on Aerial Navigation thinks that the aeronautical medical services have become and will become more and more a special and distinct branch of general medicine, and therefore hopes -

"To have aeronautical physicians prepared for the hard task devolving upon them by means of a technical specialization in aerial navigation, and to have them fly at least enough to gain experience which, while not equaling that of pilots, will, nevertheless, enable them to knowingly judge the great physical and moral qualities they must require of navigating personnel and to realize themselves the degree of aptitude required for the normal service of an aviator."

Contribution to the successful progress of aviation must continue to be made in the future as in the past. In this field of endeavor the way must be shown by the services.

AN ODE TO THE FIRST PURSUIT GROUP

It will be recalled that during the winter of 1929-1930, Lieut.-Colonel Royce, then Major, led a flight of the First Pursuit Group, Selfridge Field, Mich., through the Northwest. This flight has since gone down in the records as the "Arctic Patrol."

During that time a stop was made at Helena, Montana. A freshman in the Helena High School by the name of Alice Lee Wood, aged 15, wrote a poem, entitled "The Snowbirds." During the flight of the Provisional Winter Test Group this year, the pilots were presented at a joint session of the Montana State Legislature, and the following poem was read and presented to Col. Royce:

THE SNOWBIRDS

The Army birds have just left town,
They stayed here all last night.
When o'er this town they flew around,
Oh what a marvelous sight.

They left their homes in Michigan
On an endurance flight,
But before they land back home again,
On many fields they'll light.

They are called the Army Snowbirds,
And what a name they take,
When they are flying in the air,
Of what a noise they make.

The pilots all were faithful,
They flew in snow and rain,
But coming into Helena
They saw the sun again.

The Major deserves the honor
For guiding his men to fame,
Risking their lives for their country
They showed that they were game.

When they get back to Michigan,
They'll sure deserve a rest.
Then they'll wait another flight,
Knowing they've done their best.

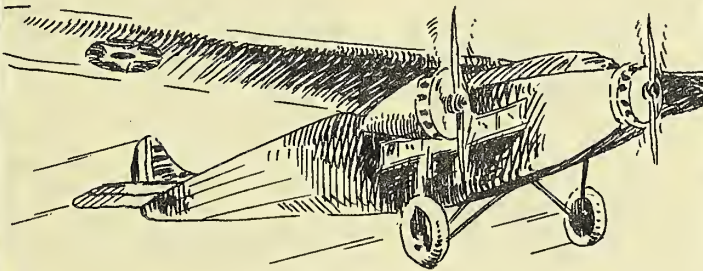
The U.S. ought to be proud
To have a fleet so grand,
And now when'er they're needed
They'll go out to take their stand.

---oOo---

On April 5th, Wright Field celebrated the coming of its new Chief, Brig.-Gen. A.W. Robins, formerly Executive of the Materiel Division. A receiving group, headed by Col. Robert Goolrick, Acting Chief of the Division since Gen. Pratt's departure, awaited him, while the official salute of 11 guns boomed forth. Later, all the officers filed into headquarters to offer greetings. It was a welcome home, not a ceremonious reception, and as such the General accepted it, stepping easily and simply into the highly responsible position assigned to him.

Mr. Luce

AIR CORPS



NEWS LETTER

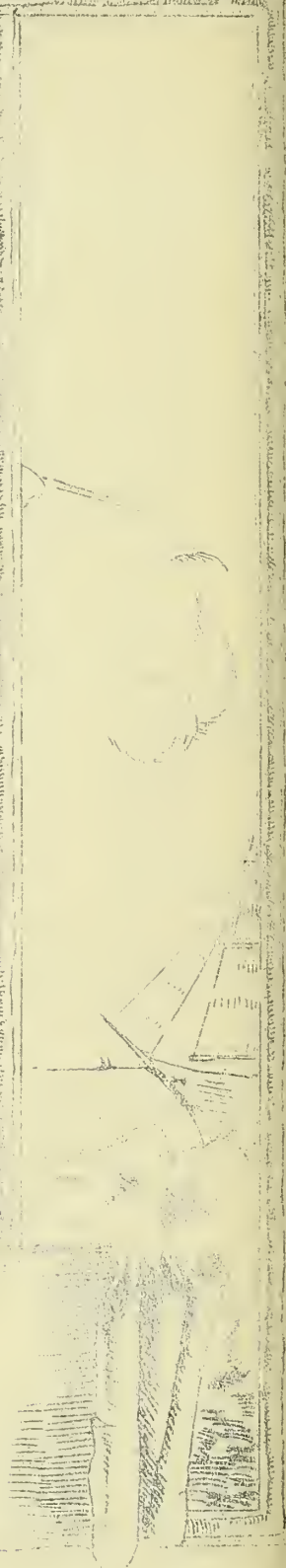
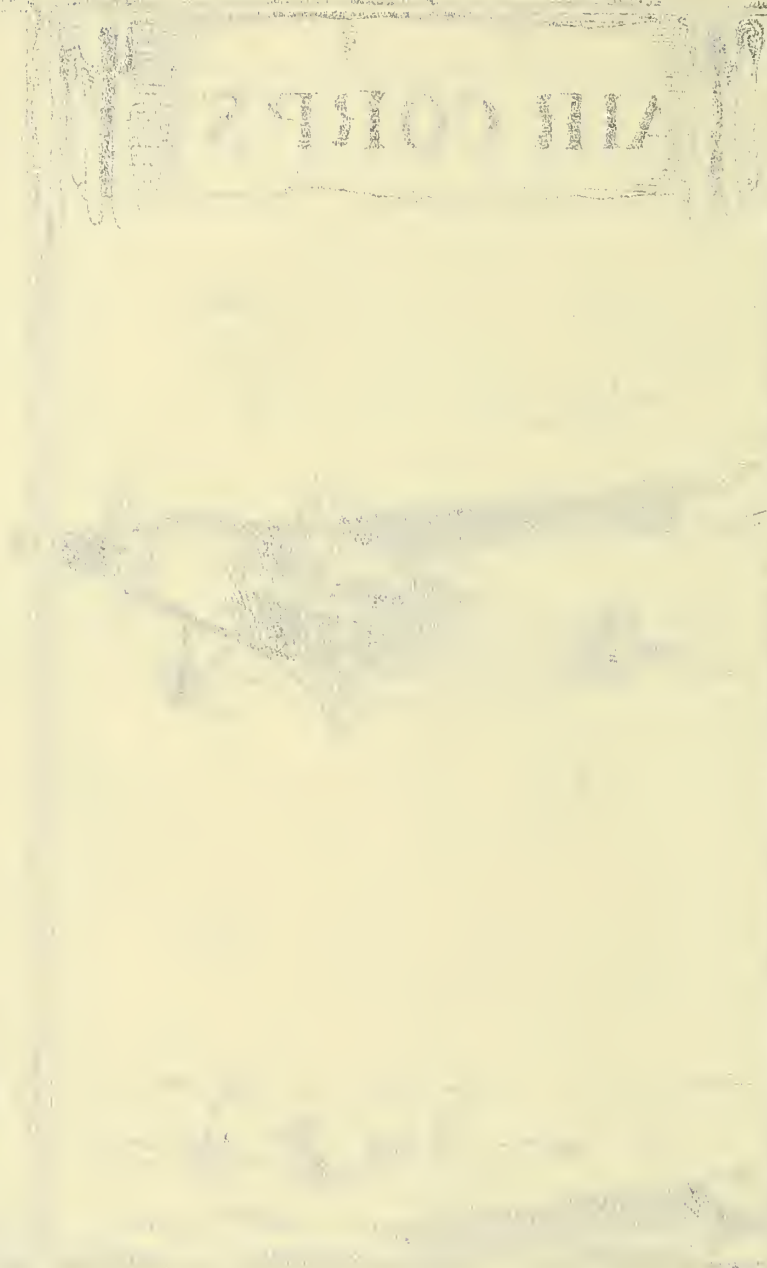
F.C. BARRY - 22

ISSUED BY
OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON.

OFFICE OF THE CHIEF OF POLICE
CITY OF NEW YORK
NEW YORK

RECEIVED

1917



The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

THE FORTHCOMING STRATOSPHERE FLIGHT

In a radio address delivered over the National Broadcasting Company Blue Network on Saturday evening, April 20th, on the subject of this year's National Geographic Society-Army Air Corps Stratosphere Expedition, the Hon. George H. Dern, Secretary of War, said:

"Since the earliest times the War Department has handled many affairs far removed from the business of fighting or preparing for war. With the establishment of Army flying, opportunities to cooperate with other departments which do not possess a flying service have greatly increased the number of instances where the War Department has stepped out of its usual role.

Man first achieved flight in a heavier-than-air machine in 1903, and this conquest of the air has, during the short years which have since elapsed, come to be of such tremendous significance to the United States Army that its influence enters into our every major project and plan. Notable efforts have been made, recently, to extend the realm of heavier-than-air operations into the stratosphere. These efforts have been attended by many of the uncertainties which handicapped pioneer flights into the (troposphere) lower regions of the air.

The characteristics and capacities of large stratosphere balloons, such as have been used in several high altitude flights both here and abroad, offer especial advantages for obtaining the knowledge of the upper regions of the air so essential to a general utilization of high altitude flight by heavier-than-air machines. Since airplanes comprise the principal equipment of the Army, we are very much interested in securing sufficient knowledge to enable them to operate efficiently at very high altitudes. To this end the Army Air Corps cooperated with the National Geographic Society last July in making an exploratory flight into the stratosphere. Major William E. Kepner and Captains Albert W. Stevens and Orvil A. Anderson, Air Corps, made this carefully planned and well executed flight and were well on the way to attaining a splendid success when unfortunate mishap overtook them at an altitude of 60,613 feet, where the fabric of the great balloon ruptured and caused the balloon to descend.

In the course of the descent these

three heroic aeronauts displayed their mettle by making every effort to effect a safe landing to save the valuable equipment and the data which had been obtained. Despite the fact that the failure of the balloon fabric became progressively greater and the balloon gained momentum in its descent, all three men stayed with the balloon and continued to do everything possible to retard its fall until complete collapse of the great bag compelled them to jump with their parachutes to save their lives. For their distinguished services, foresight and judgment displayed in this flight, the President awarded to Major Kepner, Captains Stevens and Anderson the Distinguished Flying Cross.

The War Department has kept in operation, through the past years, a small nucleus of lighter-than-air activities, although appropriations have barely permitted doing so. It is a satisfaction to me, personally, to know that this policy made possible the Department's cooperation with the National Geographic Society last year and will permit us again to join with them in a second effort to be made next June. Had it not been for the continued research and experimentation by the Army Air Corps in this branch of aviation, the Army would have been unable to undertake these important missions. The lighter-than-air personnel of the Army may well take pride in their accomplishments in the face of numerous handicaps. One reviewer has stated that in aviation the balloon has always served as the trail-blazer for the airplane.

The crash of the gondola of last year's stratosphere balloon destroyed many of the instruments and much of the data that had been obtained. However, much worthwhile knowledge was secured notwithstanding, and the aeronauts themselves gained invaluable experience. Their observation of the functioning of the instruments prior to the mishap indicated that, provided in this new attempt a safe landing can be effected which will preserve intact the records made by all the instruments carried, the data thus made available will yield the knowledge which will enable a worthwhile further advance in the conquest of the upper air.

It is to be regretted that Major
V-6777, A.C.

Kepner, who made last year's flight, is unavailable this year. He desires to enter the Air Corps Tactical School next fall, and the transfer of his important duties at Wright Field to his successor will prevent his participation in this year's stratosphere flight. However, the other two members of last year's team, Captains Stevens and Anderson, are available and will make the flight next June. Assisting them as alternate pilot and ground control and meteorological officer will be Captain Randolph P. Williams, Air Corps, another able and experienced officer.

The services of these experienced and highly qualified airmen assures the highest skill and ability as ponderable factors making for success in this new effort. In addition, as a result of the studies which have been made of the causes of the structural failure of the balloon used last year, this new balloon will be of improved design and stronger construction. It will, I am told, be equipped with webbing suspension bands instead of ropes and have two gas valves each of the size of the single valve used last year. As a special safety measure, Lieut.-Colonel Edward L. Hoffman, Air Corps, will equip the gondola itself with a huge parachute of his own design, arranged to lower the gondola in safety in the event of accident to the balloon. And for the greater safety of the airmen, the National Geographic Society has procured helium for use in the next flight instead of hydrogen, which was utilized previously.

Many scientists throughout the United States have placed valuable data at the disposal of the Scientific Advisory Committee for the flight, and many Army personnel are cooperating with the officers who are to make the flight in order that everything may be done to assure success. Among the factors which may be expected to contribute to success are the notable prior achievements in similar lines.

And so we witness the unceasing efforts of our brave pioneers to open up new vistas of accomplishment. The past flights of manned balloons into the stratosphere have demonstrated their value in adding to our knowledge of this little known realm.

In closing I desire to express to the officers and members of the National Geographic Society the War Department's appreciation of the valuable efforts they have sponsored and are about to sponsor to obtain scientific knowledge calculated to advance the art of flying. It is an honor for the Army to be associated with this distinguished Society in such a notable work in behalf of the advancement of the world's knowledge.

I extend my best wishes for success to the Society, to the Air Corps and to the officers who are to make the flight.

I expect to be present to witness the

start of the stratosphere flight from Rapid City, South Dakota, next June, and to talk with the officers who will make the flight. To those of you who will not have this opportunity I desire to introduce these officers and to let them, at this time, say a few words to you of their hopes and plans. Captain Stevens, in addition to making last year's National Geographic Society-Army Air Corps Stratosphere Flight, has made high altitude airplane flights and, as early as 1922, made a parachute jump from 24,206 feet. Captain Anderson is one of a limited number of officers holding all four flying ratings bestowed by the Army Air Corps and is highly qualified in air navigation. Captain Williams also holds all four flying ratings and is an expert meteorologist. These officers will speak to you from Wright Field, Dayton, Ohio, where they are now busily preparing for their flight in June."

CAPTAIN STEVENS' REMARKS.

It is very kind of the Secretary of War to show so much interest in our coming stratosphere flight and to give so much attention to it. Our work so far has involved long hours of preparation, but we have been fortified by the knowledge that men in laboratories all over the country have been putting in just as long hours as we have. Several scientists have already arrived and have installed their instruments in the gondola. These instruments have been taken out and have been returned to their various makers for last minute adjustments and trial. The Cosmic Ray Apparatus of the Bartol Research Foundation, and the spectrographs of Bausch and Lomb have been placed. Today Mr. Himeline arrived with the six Factograph Cameras that will record elevation, and temperature, and nearly a score of other things. Our Fairchild Aerial Cameras are ready, and are under prolonged test. This coming week, Mr. Morris, of the National Broadcasting Company, will install his high frequency radio transmitter. Our own Signal Corps Laboratory at Wright Field is building two extremely short wave transmitters that will broadcast on wavelengths of approximately 5 meters and $2\frac{1}{2}$ meters. The Bureau of Standards has finished the special containers, made of glass, protected by metal that will be used to trap samples of the upper air. The Bureau has also completed a new electrical resistance thermometer.

All of these instruments are to go in the Downmetal gondola that now is suspended in our laboratory here at the Materiel Division of the Air Corps. Although this year's gondola is a full nine feet in diameter, there will not be any space to spare when two of us get inside of it for the June stratosphere flight. More than four tons of lead in the form of tiny shot known as lead dust



will be used to keep the balloon from shooting skyward like a rocket. The ascent must be closely controlled in order to secure the most accurate readings of the many instruments.

Like a voyage to the lower depths of the sea, a flight like this needs the most elaborate and careful preparation, because the conditions under which we will work will be so far different than those on the surface of the earth.

Captain Anderson and Captain Williams are leaving at 4 o'clock tomorrow morning by airplane for St. Louis, where at 7 o'clock an 80,000-foot balloon will be ready for flight. At the present moment this balloon is being filled at Scott Field, Belleville, Ill. Weather permitting, a flight will be made tomorrow in the smaller balloon for the purpose of testing certain scientific apparatus, and on the completion of this flight Captains Anderson and Williams will bring the apparatus and data back here at Wright Field.

CAPTAIN ANDERSON'S REMARKS

To be chosen as a member of the crew of this year's National Geographic Society-Army Air Corps Stratosphere Expedition is an appreciated honor.

Since last summer's flight, much has been done in design, construction and method of operation to add to the safety of the next stratosphere project and to simplify piloting procedure. The substitution of helium, which is non-inflammable, for hydrogen as a lifting gas will entirely eliminate the hazard of explosion. The stronger fabric being used this year, together with an improved method of fabric folding, will diminish greatly the possibility of any bag failure. However, a large parachute is being installed on the gondola as an additional safety factor to the equipment and crew. Ballast in the form of lead dust will be discharged by a simple operation of an electric switch, and such of our equipment as will be used for ballast purposes can be released by cutting individual wires, permitting such equipment to float on parachutes, harmlessly, to the ground. There will be complete duplicate gas valve installations for releasing the lifting gas. These valves can be operated jointly or separately at any altitude.

Through these and other improvements, we believe that, despite the immense size of this craft, our piloting problems have been made quite simple and successful flight assured.

We look forward to the coming expedition with expectation of a very profitable and interesting experience.

Dr. Gilbert Grosvenor, President of the National Geographic Society, who spoke with the Secretary of War from the Army War College, after expressing the pleasure of the Society over being

again associated with the Air Corps in an expedition to explore the mysteries of the upper air, enumerated various expeditions sponsored by this Society across all the continents and all the seas.

"The stratosphere," he said, "is lifeless, lonely, and desolate. Yet only there may some emanations from the outer space be recorded in their full intensity. Such are cosmic rays and the ether waves which bring our words to you by radio.

Our problem is to lift a workshop and complicated tools, along with men who can live and work, to places in space which only a few years ago were deemed inaccessible. This workshop is a hollow ball 9 feet in diameter, made of metal lighter than aluminum, housing more than a ton of scientific instruments. To lift this workshop to its lofty position requires a balloon so large that three acres of rubber cloth were needed to fashion it."

After pointing out that the forthcoming stratosphere flight will mark the first time in history that a balloon inflated with helium instead of hydrogen will ascend into the stratosphere, Dr. Grosvenor stated that the wonder gas, helium, was first discovered in workable quantities in 1903, when a well that was being drilled in Kansas came through with a strong flow of natural gas. Great was the rejoicing in the village nearby—the discovery of the natural gas being hailed as the harbinger of great prosperity — but the joy was premature and short lived, for the goose that was about to lay the golden egg seemed to die before the egg appeared. To the consternation of all concerned, the gas was found to be non-inflammable and therefore worthless as fuel. It would not burn. Samples of the gas were sent to the University of Kansas for examination in order to discover the cause of its astonishing behavior. There it was found that the gas would not burn because it had a content of two percent of helium.

Natural gases containing helium have since been discovered widely distributed over the United States, but only a few localities have been found in which the quantity of helium in the natural gas is large enough to pay for the expense of extracting it. Thus far the United States is the only country in the world in which gases bearing helium in sufficient amount for profitable extraction to float enormous balloons and airships has been found.

By complicated and expensive machinery, the helium is removed from the natural gas as it flows from the earth, and then the remaining 98% of the gas is pumped through pipe lines to a market perhaps thousands of miles distant.

Our balloon has been made larger than any heretofore constructed in the hope that it may attain the utmost possible altitude, for each mile of height increases the scope and value of observations.

V-6777, A.C.

TORSIONAL VIBRATION INVESTIGATION TO PROMOTE SAFETY IN FLIGHT
By the Materiel Division Correspondent

During the past several years, the Air Corps Materiel Division, Wright Field, has been active in the study of crankshaft torsional vibration in both in-line and radial engines. The ill effects of resonant vibrations are well known when they affect instrument readings, vibrate fuel lines and cause fatigue failures of engine mounts. However, when resonance occurs between the moving engine masses and the propeller, very little effect is noticeable to the pilot. For this reason, it is possible to operate an engine unknowingly in a resonant period for long intervals of time. The result is galling of the propeller cones and, in extreme cases, failure of the crankshaft or propeller because of the very high stresses set up.

It was necessary, before a remedy could be found, to develop a convenient means of recording the vibrations of the crankshaft while the engine is under load comparable to that of a propeller in the air. The development of a suitable instrument has covered a period of six years, during which time many possible methods were considered or tested. The final result is the Materiel Division Torsionometer now used by the Army and Navy and the large manufacturers of Air Corps engines. This device consists of a driving member adapted to engage the starter jaw of the engine, and a spring-driven flywheel whose rotation is sensibly constant. The relative torsional motions of the driving member and the constant-speed flywheel are utilized to actuate a stylus which rotates with the flywheel. The stylus thus draws a graph of torsional displacement vs. time. These records reveal the frequency and amplitude of torsional vibration and enable accurate determination of the critical resonant range of the crankshaft.

It has been learned that an in-line direct drive 6-throw crankshaft, such as in the Liberty engine, has 3 dangerous resonant periods, all having the same frequency. In the case of the Liberty, these were 1000 R.P.M., 1330 R.P.M. and 1710 R.P.M. At 1000 R.P.M., there are six vibrations; at 1330, $4\frac{1}{2}$ vibrations, and at 1710, $3\frac{1}{2}$ vibrations per revolution. The frequency in all these periods is 100 vibrations per second.

In the case of a direct drive 9-cylinder radial engine, such as the Wasp, it was learned that a dangerous resonant range exists approximately from 2200 to 2800 R.P.M. The frequency is 165 vibrations per second at 2200, and 210 vibrations per second at 2800 R.P.M. It is probable that the truly resonant period is about 2500 R.P.M., at which speed the frequency is 187.5 vibrations per second. In the Liberty engine, crankshaft failures occurred when operating near the

1330 and 1710 R.P.M. periods, while several failures have occurred in Wasp engines with flying propellers, at 200 R.P.M.

It has been determined that the propeller used has a vital effect on the resonant range, some propellers on the Wasp engines reducing the lower range from 2200 to about 2000 R.P.M. It is also found that all engines employing reduction gearing have lower resonant frequencies than do direct drive engines of the same type. In some of the geared engines this reduction of frequency was great enough to remove the resonant range entirely out of the cruising and full throttle range utilized in the air. In others, the resonant period was unfortunately placed where it was necessary to cruise for extended periods with the crankshaft in torsional vibration. As a result of this, cone galling and cracking of propeller blade shanks were encountered, with some actual failures chargeable to this cause.

The latest development is a remote control torsionometer, which could be operated by a pilot while flying. With this device it is believed the first actual flight records on an airplane engine have been obtained by the Air Corps. This instrument is being refined and will prove a very useful device, being much more convenient as well as faster and safer than the use of the original instrument.

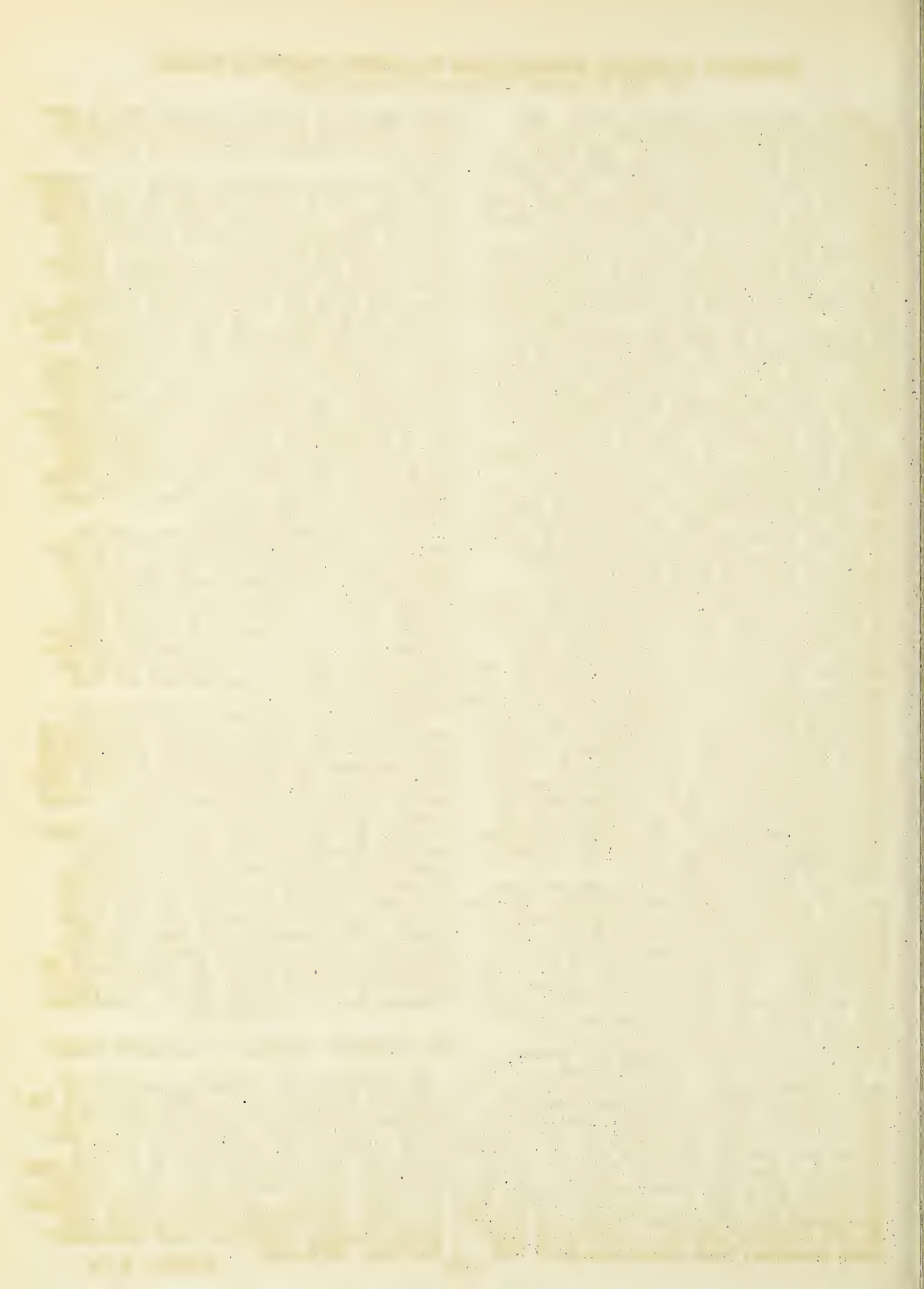
This study has already resulted in making engines much safer in flight, and as a result of the knowledge obtained a very successful damping device has been developed by one manufacturer which prevents torsional vibration at any engine speed. In other cases, suitable changes in rigidity of crankshafts have removed dangerous periods to little used speed ranges and thus minimized danger of failure. Speed limitations have been placed on still other types in which no other remedy has yet been found. The constant aim has been to make Air Corps engines secure against mechanical failure due to crankshaft resonance in order that the pilot's confidence in his engine may be justified.

---oOo---

THE BUILDING PROGRAM AT HAMILTON FIELD

To complete the building program at Hamilton Field, Calif., \$790,250 will be needed, according to Captain Howard B. Nurse, Constructing Quartermaster. His plans include the erection of a Post Exchange, \$50,000; Service Club, \$54,000; Gymnasium and Theatre, \$85,000; Bakery, \$17,250; Chapel, \$60,000; Public School, \$40,000; additional landing mats and paved aprons, \$250,000, and sprinkler service, \$234,000.

V-6777, A.C.



DETAILED DATA ON MANEUVERS OF SECOND BOMBARDMENT GROUP

The March 15th issue of the News Letter contained an account of the Maneuvers of the 2nd Bombardment Wing in the Fourth Corps Area during January, 1935. The following are some of the detailed data compiled by the Commanding Officer of the Group, Major B.G. Jones, Air Corps:

Mobilization.

The mobilization plans as prepared by the Groups were followed in clearing the home station, Langley Field. Three weeks were required for the mobilization of the Groups, although it is believed this should be accomplished in one week. To secure better results, however, will require more training in preparing mobilization plans and in carrying them out. Forty-eight hours for a Group to clear its home station should be set as the objective.

Troop Movements.

During the course of the maneuvers, the Pursuit units broke camp seven times each for White and Red, White averaging 3.3 hours and Red 3.7 hours for this operation. The White Bombardment averaged the same as the White Pursuit, although the Red Bombardment was able to improve upon this time, averaging 2.2 hours for breaking camp. It was found that establishing camp required less time than breaking camp, being accomplished in the following average times:

White Pursuit,	2 hours
Red Pursuit,	3.7 hours
White Bombardment,	4 hours
Red Bombardment,	1.5 hours

Note: While there is considerable variation in these times, the actual conditions at the respective camp sites undoubtedly influenced the time element.

While the above times for making and breaking camp obtained, it is interesting to note that for the White Pursuit Squadron no time was lost on this score, as duplicate camp equipment was provided and an advance echelon had camp made when the unit arrived, while a rear echelon broke the old camp after the departure of the planes. It is evident that this is a highly desirable procedure where the additional camp equipment can be made available.

Operations.

It was found that the Pursuit required an average of one hour to prepare for each operating mission, that is, refuel and clear airdrome, while the Bombardment required an average of two hours. It was found that Pursuit patrols sent out ahead to screen the Bombardment usually made the first contacts with each other. Usually the Bombardment was attacked prior to reaching its assigned objective.

Bombing missions were carried out at various altitudes between 2,000 and 10,000 feet. All bombardment missions (24) reached their objective. Three Bombardment planes per flight and nine per squadron - in the air - were found to be the most satisfactory formations. Sixteen planes per squadron, to give two flights of six in the air, are considered too many. Six-plane flights, with two elements of three planes each, make a more flexible squadron in the air but greatly increase the difficulty of handling the squadron formation. The added maintenance and ground personnel required make rapid shifts of base more difficult.

Camera guns were used to determine results, and 194 Bombardment planes were hit by Pursuit. Auxiliary tanks for Pursuit were found necessary for effective performance of missions. Therefore bombs, if carried, should be on wing racks.

For Pursuit squadrons, the 18 planes in the air, with three flights, each of two 3-plane elements, was found most satisfactory. A total of 121 Pursuit planes were hit by Pursuit and 76 by Bombardment. The Pursuit used the open "Vee" formation for search and the "String" formation for attack.

For Bombardment-Pursuit defensive, the best formation was found to be a 9-plane Bombardment formation with three 6-plane Pursuit flights above them, each in "String" formation. Due to their greater speed, these Pursuit flights fishtailed, and this made for a more effective protection for the Bombardment below. Five offensive Pursuit missions failed to contact the enemy. On two of these, no enemy planes were in the air.

When Bombardment airplanes were attacked while they were on the ground, the gun cameras mounted in the plane were manned. Also, both Bombardment and Pursuit mounted spare gun cameras on fence posts. By this "fire" from the ground, 237 hits were made against airplanes in the air as against 43 hits made against the airplanes on the ground. This would appear to indicate a superiority in daylight combat for the planes on the ground as against those attacking from the air. However, had the planes in the air used bombs against machine guns, quite a different result would have been obtained. Furthermore, in a maneuver between two forces from the same Groups, with identical radio and an intimate knowledge of each other's methods and habits, far more readiness to resist attack is to be expected than in actual warfare. In each Bombardment squadron three airplanes were kept on the alert, and in each Pursuit squadron from one to six airplanes.

Pursuit patrols were used as Observation. One radio plane was used above V-6777, A.C.

large formations to warn of approach of enemy and inform as to enemy's formation and movements.

Transport Airplanes.

Transport airplanes were used, in part, to make moves and carried loads as given below:

	(a) Passengers	(b) Load
C-4A	Pilot, Co-pilot and 12	3000 lbs.
C-12	Pilot and 4	1000 "
C-14	Pilot and 6	1600 "
C-24	Pilot and 6	1600 "
C-27	Pilot, Co-pilot and 10	2400 "
C-27A	Pilot and 10	2400 "

It was determined to be desirable to have transport airplanes capable of carrying ten men and their tents, baggage and two days' rations, also that the Transports should be equipped with controllable pitch propellers, slots and flaps to facilitate use into and out of small fields. In addition to the heavy Transport airplanes, each Group should have one light, very fast transport for urgent missions involving speed, such as supply of an emergency repair part or transfer of key personnel.

The following faults were found with Transport airplanes used in the maneuver:

C-12, cramped and uncomfortable for both passengers and pilot.

C-14, cabin poorly ventilated.

C-27A, poor seating arrangement (side benches).

All, except C-27 and C-27A, doors too narrow.

Trucks.

Due to shortage of $1\frac{1}{2}$ -ton trucks, a number of $\frac{1}{2}$ -ton were used to make moves between camps. The $\frac{1}{2}$ -ton truck does not lend itself well to loading, takes extra truck drivers and, due to the greater numbers required, makes an unwieldy train on the road which is difficult to control. A 200-mile move by truck was found to be the maximum that could be accomplished in one day, allowing for breaking and making the camp.

Camps.

The best arrangement for camp placed the tents on the prevailing wind side of the flying field and, therefore, out of the dust. The tents and airplane parks were kept off the prolongation of the best runway. Airplane parks were kept at least 150 feet away from tents and down wind to avoid dust in the tents. It is to be noted that the commercial use of the airports utilized in the maneuver prevented a dispersed parking of airplanes such as would be used under active service conditions.

Camp Procedure.

A two-day ration reserve was maintained, as far as possible. Perishable articles were purchased locally and used at point of purchase.

Straw mattresses made bulky, lumpy bedding rolls and the men were cold sleeping on them in temperatures as low as 20°. The best bedding, both as a roll for transportation and for comfort, is the Sleeping Bag, Type A-1, with pneumatic mattress.

Paper plates were found to be a desirable messing convenience. Paper cups probably will be found equally convenient.

To reduce items of mess kit, a combination fork-spoon is recommended, that is, fork on one end and spoon on the other.

Film Development.

Unavailability of running water and lack of an analysis to determine presence of injurious mineral substances in the water were great handicaps in developing gun camera film. The drying rack carried was not of adequate size. Low temperatures of weather required a means, which was lacking, of keeping developing fluid at best temperature. Special measures had to be used to prevent this fluid from freezing at night. As a rule, film was developed within 24 hours.

Communications.

Radio Set Type SCR-187 functioned excellently as a portable ground radio set when properly employed.

The maximum reliable range of the SCR-187 set ground to ground, when operated properly and with a suitable antenna is a mathematical function of the frequency used.

(a) Daylight on C.W.

	6640 KC	3560 KC	4300 KC
Band	Band	Band	Band
Reliable			
Ranges (miles)	0-50; 300-1000	0-200	0-500

In the above table 0-50, etc., indicates that communication was continuous under average conditions at all points from zero to fifty miles away, etc.

(b) Night on C.W.

	6645 KC	3560 KC	4300 KC
Band	Band	Band	Band
Reliable			
Range (miles)	0-30	0-200	0-100

Both the tables in (a) and (b) above assume clear channels with fair weather conditions. In very bad weather these distances were somewhat reduced, while on excellent days the maximum distances are too modest. For example, the Wing Station on the ground at New Orleans worked successful schedules with Langley Field on 4300 kcs., a distance of 930 miles, which is nearly twice the maximum distance stated for that frequency in table (a). Also in the 6645 band, voice communication works excellently throughout practically the whole ranges listed in V-6777, A.C.



table (a) for that frequency. This is not mentioned in the tables, however, because it is believed that voice should not be used in ground stations. Tone modulated signals were used on all frequencies for test with satisfactory results; CW is superior, however, due to narrower frequency band required, with consequent sharper tuning, greater distances obtainable with less power drawn from the source of power supply.

The only frequencies assigned were 3520 kcs. and 3650 kcs. During the late afternoon, and especially Sunday afternoons, these frequencies were completely jammed by amateur stations in the vicinity in which the Wing operated.

Where the distances involved are considerable, recommend the 4000-4400 kcs. band for daytime use. At distances where communication is desired to all points within a circle of 80 miles radius or less, recommend that the 400-800 kcs. coils be procured and used. These would provide continuous reliable communications for the shorter ranges, day and night.

For day use, 4300 kcs. was found to be the best frequency for the type of maneuver just engaged upon. For night use, the frequencies 2900-3500 kcs. possessed good carrying qualities, but no one frequency could be found that was clear at all times at all localities. The 3560 kcs. frequency was used most extensively, although we were considerably troubled by interference by amateurs.

Due to the high current drawn by the SCR-187 dynamotor, it would have been impossible to operate the transmitter more than a very few minutes when operating directly off the battery while it was not receiving a charge when, as a matter of fact, the Air Force Headquarters were separated from each other or from the Wing Hqrs. by distances varying from about 50 to 100 miles, and at least hourly schedules had to be kept.

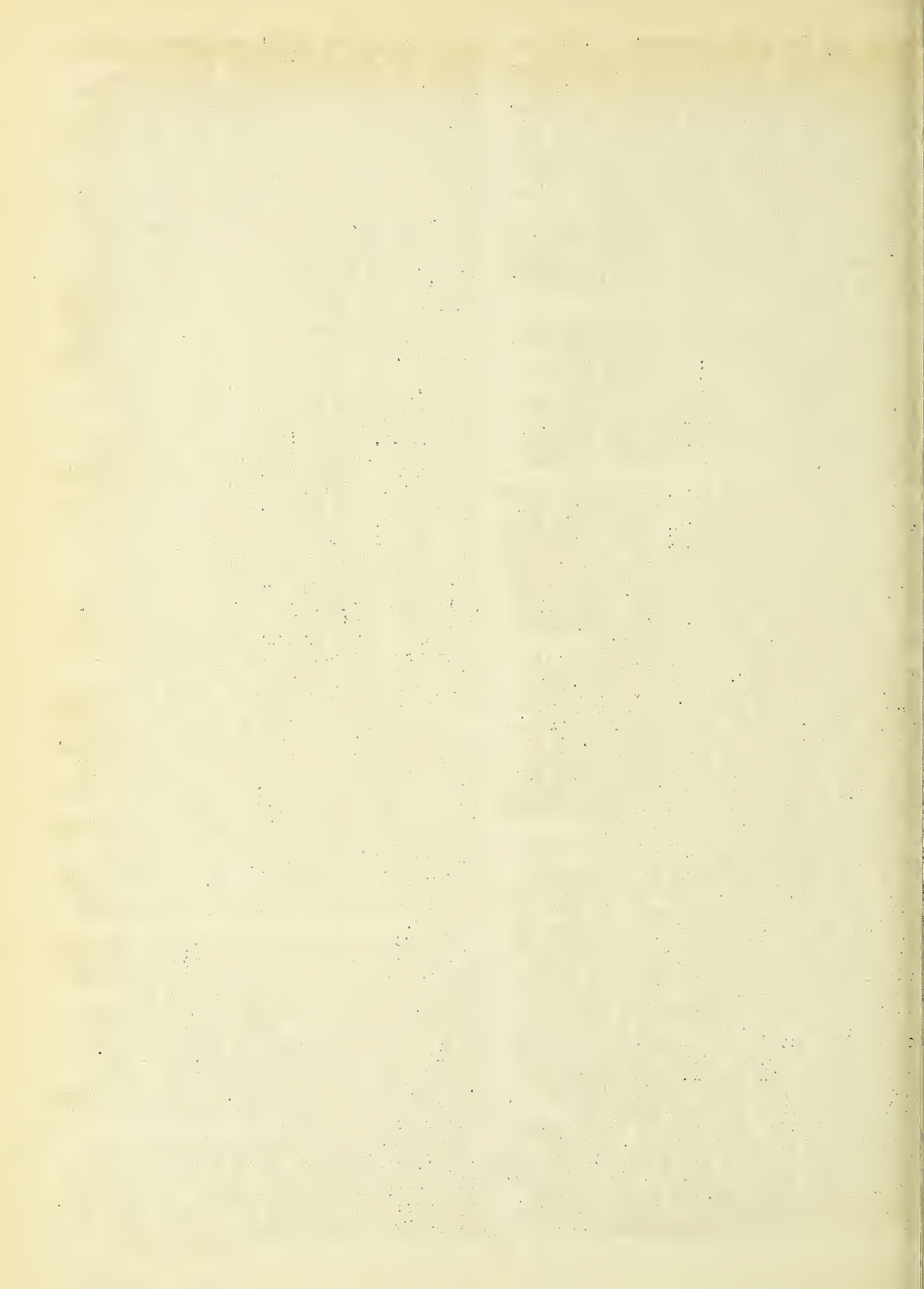
Field orders and other long messages had to be handled by radio, due to the fact that no other means of communication was available. Schedules were also kept with Maxwell Field and, on some occasions, with Langley Field, so that on busy days the operation of the Wing Station installed in the OA-4A Amphibian airplane approached six hours of actual operations. Obviously, it was impracticable to run the engines of the airplane on the ground for the entire day's operation, so it was necessary to carry some type of power supply along for the operation of the ground net. PE-AA-49 power units not being available, the only power units on hand were the PE-CL-41 units. These were taken along, transported by truck convoy. As the permissible current to be drawn from the low voltage side is small, the dynamotor SCR-187 set could not be used, but by using the maximum high voltage possible by cutting out all resistances and by

speeding up the power equipment engine, power was drawn directly from the PE-CL-41 for the SCR-187 transmitter. Even then the receiving set was a continuous drain on the airplane battery which after a day or two of continuous operation would be dead. But as it was necessary to continue operations, the PE-CL-41 was again mustered into service. The leads on the battery side of the airplane voltage regulator control box were disconnected, and connection was made through the main line switch and a small ammeter to the low voltage side of the PE-CL-41 power unit, thus keeping a continuous charge of about 14 amperes into the airplane battery which was ample to keep the battery in excellent condition. When battery was fully charged, the main line switch was simply snapped off. A study of this circuit reveals that if the charging voltage suddenly fails for any reason, such as the stopping of engine of the power equipment, the voltage of the battery will be directly across the generator windings. Thus for safety to the generator, this circuit should be connected through a sure fire reverse current cut-out relay. The relay in the control box was not used for this purpose, due to unreliability of functioning. It was deemed more advisable to closely watch the charging current and open the main line switch if current started to decrease noticeably. With above modifications, power supply was adequate, except for the weight and bulk of the power equipment units, type PE-CL-41. Even the power equipment, type PE-AA-49, is too heavy (225 lbs.) for this purpose.

It is believed that a power equipment consisting of an E-3 airplane generator, equipped with a cooling fan and driven by a moderately high speed gasoline engine of just sufficient weight and size to turn the generator at 2750 r.p.m., its rated speed, should not, if properly designed, weigh more than 120 pounds. The cost of design of such equipment should not be material, as the radio set is entirely inoperative without a power supply which can be easily transported by air.

The power equipment units, type PE-CL-41, failed on several occasions, due to breaks in fuel lines, ignition difficulties, carburetion trouble, and the breaking down of the filter condensers across the output. The present condensers are not designed to withstand sufficient transient peak voltages, and frequently break down under the rated load of the units, although the remainder of the unit is built to withstand a considerable overload.

No maintenance difficulties were encountered with the three SCR-187 sets used in the Wing net. The set should be both operated and maintained by a radio operator and mechanic of better than average radio knowledge of tuning and



coupling of circuits. With that stipulation satisfied however, no difficulties of any nature were encountered.

In Bombardment airplanes the maximum reliable range of the SCR-183 radio set was:

1. 3100 KC band - 50 miles.

2. 6000-7000 KC band - 30 miles. In this band, operation is nearly always possible beyond the first ship space, sometimes for hundreds of miles. Due to the apparent variation of the length of this first skip space, however, we have a distinct aversion to listing a greater reliable distance than that listed above for this band.

In Pursuit airplanes it was: Fifteen miles, if transmitting plane is in the air. If on the ground, five miles.

This is satisfactory only for command purposes within a Group formation, but not satisfactory for command communications in a wing formation, or, what is more important, for communication between a Group and its detached units, such as patrols, observers, etc., in the air, but not in the same formation. For this communication the power output of the BC-180 transmitter should be increased. It must be pointed out also that when a Group is operating from dispersed airdromes there is absolutely no communication between the Group Headquarters and the separate squadrons.

It is recommended that the power output of the BC-180 unit be increased, and that on airplanes such as Bombers, where larger fixed antennae can be mounted, that lower frequencies be used for greater reliability, that is, frequencies around the 3000 kc. band.

No difficulties were experienced in using the Department of Commerce communications facilities for disseminating weather data. Lack of practice was evident in using two-way radio communication. The radio beacons were utilized without difficulty.

Servicing of Airplanes.

Drums were satisfactory for reservicing Bombardment, but were too slow for Pursuit, unless extra pumps are furnished. This, however, would entail use of additional personnel. Drums should be spotted as near planes as possible, or vice versa, to save manhandling of drums.

Supplies and Equipment

(1) Equipment needed but not taken:

Cans, G.I.

Buckets, G.I.

Typewriter, Portable, (1 per Sq.)

Insufficient number of camp cots taken. Frequent breaks in the wood used caused this shortage.

Brighter type of lantern was needed, similar to the gasoline lantern types. (Oil lantern unsatisfactory; no night maintenance in the field could be performed with this type lantern.)

Socket wrenches and box wrenches (at least one set per flight needed.)

Magneto gear puller (1 per squadron).

Suitable jack (1 per squadron).

Wrench for hold-down nuts between cylinder and block (P-3E).

24-inch Stillson wrenches.

Supply tent for White Pursuit Squadron.

Extra red lanterns.

Mallets for driving tent stakes.

Carpenters tools, hammer, saw, nails.

Rakes (2 per squadron).

Flashlights, 2 $\frac{3}{4}$ -inch lens, complete.

One extra 1 $\frac{1}{2}$ -ton truck per squadron.

Cross-country bag or some different type of container for enlisted men's personal equipment (Barracks bag unsatisfactory).

(2) Supplies needed but not taken:

Cylinder hold-down studs (Bombers).

C-2 Strainer (Bombardment).

Tail wheel assembly (B-6).

Light lubricating oil for wires and propellers.

Extra axe handles (at least one per axe).

Spark plugs (should be continuously supplied to a unit in the field).

Extra rope.

Writing paper (larger supply for each Sq.Hqrs.)

Personnel:

Order of priority of assignment of enlisted men to --

(1) Wing Headquarters.

(a) Wing Sergeant Major, Wing Operations Sgt. Major, Message Center Chief, 1st Sgt. Wing Hq. Det., N.C.O. in charge of Wing Truck Train, Truck Driver - 1 man.

(b) Chief Radio Operator, N.C.O. in charge of Wing Radio Net. - 1 man.

(c) Clerk, typist, truck driver - 1 man.

(d) Assistant N.C.O. in charge of Truck Train, Assistant Radio Operator, Mail Clerk, Truck Driver - 1 man.

(e) Stenographer, typist, messenger.

(f) Wing barber and orderly.

(g) Crew Chief, Wing Hq. Radio airplane; (not considered in order of administrative importance) - 1 man.

(2) Group Headquarters -

(a) Group Operations Sgt. Major - 1 man.

(b) Group Sgt. Major - 1 man.

(c) Engineering Inspector, truck driver - 1 man.

(d) Radio Inspector and Operator, truck driver - 1 man.

(e) Armament Inspector - 1 man.

(f) Assistant Engineering Inspector, truck driver - 1 man.

(g) Clerk, typist - 1 man.

(h) Clerk, messenger, truck driver - 1 man.

(3) A Squadron -

(a) Line Chief - 1 man.

(b) Crew Chiefs and Assistants - 1 man per engine.

(c) 1st Sergeant - 1 man.

(d) Mess Sergeant and Cooks - 4 men

(e) Operations and Administrative Clerks - 2 men.

- (f) Armament - 1 man
- (g) Radio - 2 men
- (h) Supply - 1 man
- (i) Ground echelon - varying number of men,

depending on number of trucks required. In Pursuit, these men greatly overlapped with crew chiefs, cooks, etc.

---oOo---

REHEARSAL IN GERMANY OF PASSIVE MEASURES AGAINST AN AIR RAID

A report submitted by the Military Attache of the American Embassy in Germany describes the first rehearsal of passive measures against an air raid, recently carried out by orders of the Air Minister. This rehearsal consisted of two phases, first restricted illumination from 10 to 11 p.m., and complete darkness between 11 p.m. and midnight.

During the first phase some 4500 street lamps remained lighted. All windows and apertures in houses, factories and business premises had to be made light-proof with heavy cloth, cardboard or thick black paper. Electric signs and lights in shop windows had to be extinguished, and "light locks," that is, darkened spaces between an inner door or curtain and the outer door, had to be provided to prevent any projection of light from premises illuminated within.

During the second phase the only lighting in the streets was to be had from low-powered blue lights in 1500 selected standards. Head and tail lights on road and rail vehicles had to be covered except for an aperture between 2 inches and 3 inches long and less than an inch deep. Drivers were required to proceed dead slow. All trains within a radius of 50 miles of Berlin were similarly darkened.

From a vantage point on the roof of the Karstadt Building, one could easily recognize the change from full illumination to restricted illumination. With but a very few exceptions, lights in houses and establishments could not be seen, and street illumination became poor due to the reduced number of lights burning. A noticeable reduction in street traffic was also noted during this period, and street railways with their small dim lights were proceeding with great caution.

Witnessing the second phase of the exercise from an airplane flying over the city, it was noted that at 11 o'clock all street lights were extinguished and the city was in complete darkness except from neon lights on high structures in the vicinity of the air-drome, which was kept burning for the safety of the airplanes in the air.

The plane ascended to an altitude of 4500 feet and made several trips over the center of the city and around the city. Although it was a bright moonlight night, it was very difficult to see the city except that by very close and continuous observation one could distinguish the outlines of streets. The belief was expressed that the reflection of the River Spree and the various canals would have been the only means of identification of the city, and had it been a dark night even this would have been difficult. Another means of identifying the territory underneath as being

that of a city was the occasional flashes or sparks from the trolley wires, which of course would have shown up more clearly on a dark night than they did on the night of the exercise.

The complete darkening of a city the size of Berlin, such as was demonstrated in this exercise, would make it most difficult, if not impossible, for an air raid effectively to carry out a mission against a particular target in the city.

The most striking feature of the exercise and the thing that impressed all those who witnessed it from the air was the marked degree of discipline which prevailed among the civilian population, as indicated by the absence of lights throughout the entire city.

On the following day an Air Defense Exercise was conducted in one of the air defense districts into which Berlin is subdivided. This district is approximately 700 x 1000 meters and contains a population of approximately 50,000.

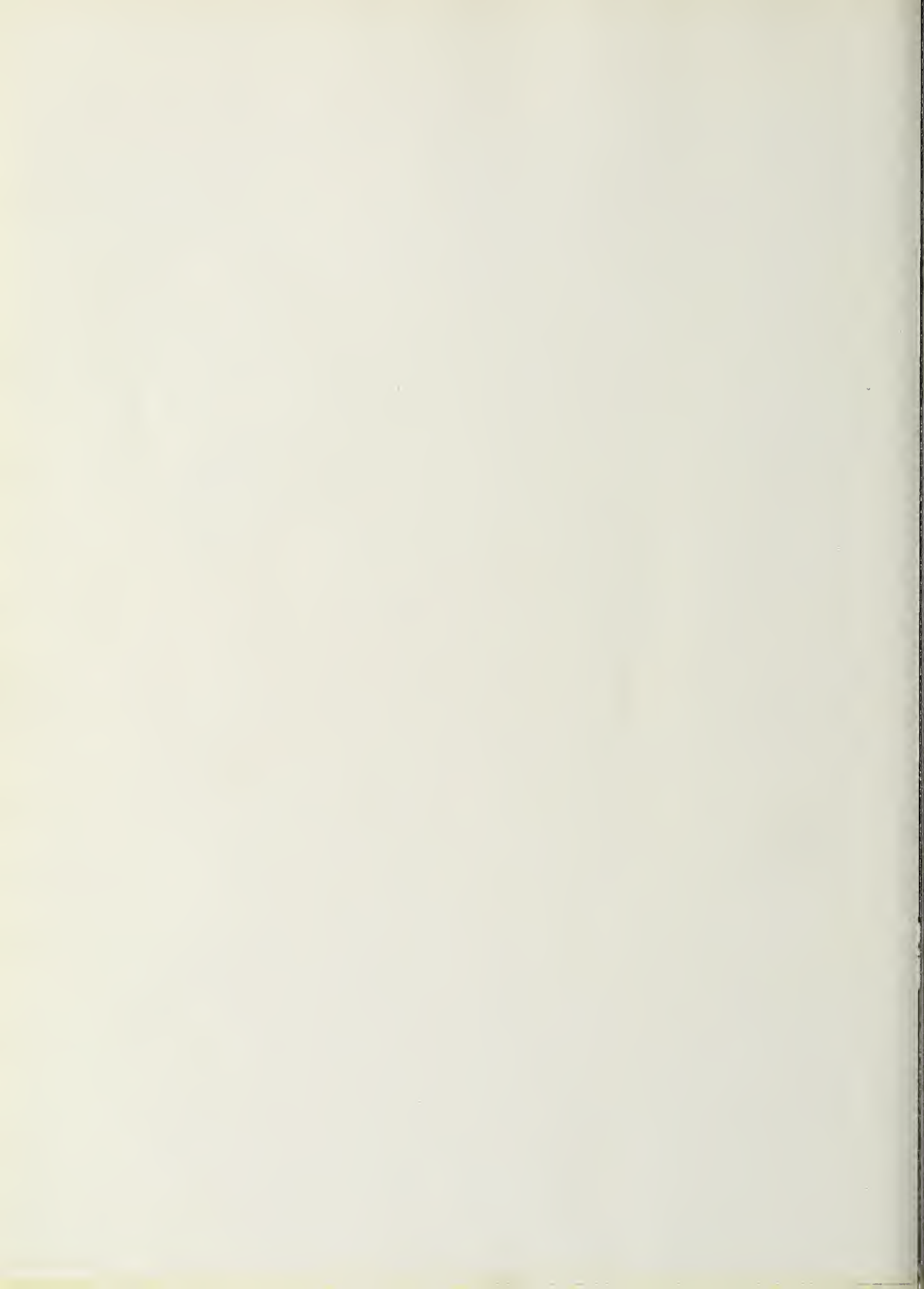
The purpose of the exercise was to test the passive air defense means which are organized by the Air Ministry under the name of Luftschutz (air protection). The Luftschutz forces are Police, Firemen, Technical Emergency Service (air defense section), Volunteer Air Defense Force, Medical First Aid Service.

The Police control the Luftschutz forces. In each district they have established an information center into which news of approaching hostile airplanes is reported over the regular telephone system.

At 10:00 o'clock on the morning of the exercise, the information center of the Kreuzberg area (No. 112) received word of the approach of an air raid. Immediately a police car with loud siren rushed through the district as a warning signal of approaching attack. All traffic in the district was stopped and all persons on the streets except police were directed to the nearest dugouts and inhabitants went into their gas proof shelters.

During the air attack and afterwards until the exercise was over, only such movement of traffic was allowed in the area as was occasioned by the activities of the Luftschutz agencies. A flight of light bombers flew over the area simulating an air bombing attack.

Simulating the effects of the bombing, smoke candles were lighted in several houses. Here the fire department went into action. The first aid service rescued several wounded and injured, dressed their wounds and evacuated them to the hospitals. In the streets, large holes such as might have been made by a bomb had been prepared. These holes uncovered broken gas and water mains. Overhead high power electric lines were broken and lying on the street. All of these utilities



were quickly repaired by specially trained squads of the Emergency Technical Service.

Broken walls of certain houses in the area were restored and made safe by other squads of this Service, they being equipped with all the necessary tools, equipment and devices which were carried on special trucks.

Areas and houses which had been gassed were treated with a neutralizing agent by squads of the Volunteer Air Defense Force. These men all wore gas masks and rubber gas proof

suits.

Those who observed the exercises were impressed by the following points:

a. The great value of a system of definite procedure prepared for in advance of the bombing attack.

b. The importance of having the proper technical equipment and personnel prepared, trained and properly distributed.

c. The excellent organization of the Luftschutz forces.

---oOo---

ASSISTANT SECRETARY OF WAR SPENDS SIX BUSY DAYS AT TRAINING CENTER

Arriving at 4:00 p.m., Friday, April 12th, from Hensley Field, Texas, in a Curtiss "Condor" Y-10-30, piloted by 1st Lieut. Townsend Griffiss, Air Corps, the Hon. Harry H. Woodring, Assistant Secretary of War, proceeded directly from the visiting ships hangar to inspect the officers and enlisted men of Randolph Field, who were drawn up in formation around the North Circle in front of the Administration Building, after which he retired to the quarters prepared for him at the Bachelor Officers' Club. After dinner at the Club, he spent the evening observing the student night flying.

Early Saturday, Secretary Woodring began a full morning by attending the reveille formation, setting-up exercises and breakfast formation of the Flying Cadet Battalion before he himself partook of breakfast at the Cadet Mess. He spent half an hour inspecting the flying and academic formations of the flying cadets; then he made a tour of the Primary and Basic Stages, where he inspected the curriculum of flying training, and was later whisked to the School of Aviation Medicine for a hurried visit. At 9:30 a.m., having completed a round of the field, Mr. Woodring left to inspect the outlying fields and was treated to the spectacle of a student flyer crashing through a fence and coming to a rest upside down on the railroad tracks beyond. Fortunately, the crash did not result in any injury to personnel. Returning to Randolph Field at noon, Mr. Woodring lunched at the Officers' Club, and a short time later departed for San Antonio by automobile.

Notwithstanding a day of bustling about, Mr. Woodring, ever on the move, was flown that evening to Fort Worth, where he was scheduled to speak. He returned to San Antonio by rail at 7:00 a.m. Sunday, Lieut. Griffiss having returned with the airplane the night before. Giving no sign of letting up in his activities, he took off with Lieut. Griffiss at 8:00 o'clock for a visit to Forts Brown and Clark, returning to Randolph Field late at night.

Another early breakfast Monday morning was the beginning of Secretary Woodring's busiest stay at Randolph Field. Leaving by airplane at 7:30 a.m., he spent the day inspecting Kelly, Duncan and Brooks Fields, returning at 4:00 p.m., and, following a visit to San

Antonio, he spent the evening observing the flood-light and flare landing phases of student night flying.

After inspecting the troops of the Second Division at Fort Sam Houston, Tuesday, Mr. Woodring departed at 9:00 a.m., Wednesday morning for Barksdale Field, La.

---oOo---

ACTIVITIES OF THE THIRD PURSUIT SQUADRON

Giving a resume of the activities of the 3d Pursuit Squadron, stationed at Clark Field, Fort Stotsenburg, Pampanga, P.I., the News Letter Correspondent first enumerates the commissioned personnel now stationed at this field, viz: Major G.E. Brower, Commanding; Maj. R.J. Platt, Flight Surgeon; Captain C.W. Ford, Operations and Executive Officer; Lieuts. W.D. Old, C.W. Davies and F.L. Fair, Flight Leaders and, occupying various other positions, Lieuts. T.W. Steed, N.H. Ives, P.B. Wurtsmith, W.M. Morgan, J.H. Bundy, W.C. Morse, H.W. Bowman, J.E. Barr and J.B. Zimmerman. He then goes on to say:

'We started the new year with maneuvers. On the morning of January 14th, 12 Pursuit airplanes and one observation plane took off for the Del Monte Pineapple Central, our headquarters in the northern part of the Island of Mindanao. We arrived that afternoon, only landing enroute to refuel at Iloilo. After out beautiful but long hop over water and tropical forests, the sight of the camp made ready for us by the enlisted personnel who had preceded us by boat, looked particularly good.

Our activities during the two weeks period of maneuvers consisted of inspection of landing fields pioneered by Lieuts. Old and Coleman, problems in radio communication and simulated defense against hostile aerial and naval forces.

Upon completion of maneuvers we made a flight to Zamboanga and Jolo from Del Monte, and returned to Clark Field by way of Cebu on Jan. 27.

On March 8th, a flight of Pursuit planes and the prescribed complement of officers and enlisted men under the command of Lieut. Old, engaged in a Gas Defense Maneuver at an outlying field west of Fort Stotsenburg between the Zambales Mountains and the China Sea. Simulated war conditions governed the exercise. All planes were camouflaged; tents, supplies and personnel were concealed in natural and improvised shelters. Gas masks were donned at sound of gas attack alarm.

TEMPORARY PROMOTION OF AIR CORPS OFFICERS
Effective April 20, 1935

Squadron Commanders to Grade of Major

Regular Rank	Name	Organization
Captain	William V. Andrews	21 Obs. (LR Amp)
Captain	Orin J. Bushey	64 Service
Captain	Roy W. Camblin	71 Service
Captain	John M. Clark	77th Pursuit
Captain	Earle J. Carpenter	1 Bombardment
Captain	John D. Corkille	8 Attack
Captain	Neal Creighton	9 Airship
Captain	Robert T. Cronau	20 Bombardment
Captain	Joseph H. Davidson	90 Attack
Captain	John M. Davies	9 Bombardment
Captain	Oliver S. Ferson	60 Service
Captain	Wm. C. Goldsborough	15 Observation
Captain	Benjamin F. Griffin	22 Observation
Captain	James L. Grisham	30 Bombardment
Captain	Arthur G. Hamilton	11 Bombardment
Captain	Caleb V. Haynes	37 Attack
Captain	Armin F. Herold	55 Pursuit
Captain	Virgil Hine	95 Attack
Captain	Harvey H. Holland	59 Service
Captain	Edwin J. House	94 Pursuit
Captain	Robert Kauch	12 Observation
Captain	Cornelius J. Kenney	57 Service
Captain	Westside T. Larson	32 Bombardment
Captain	Malcolm S. Lawton	49 Bombardment
Captain	Clarence B. Lober	19 Airship
Captain	Newton Longfellow	33 Pursuit
Captain	Frederick D. Lynch	62 Service
Captain	Jasper K. McDuffie	96 Bombardment
Captain	Leland W. Miller	61 Service
Captain	Warren A. Maxwell	56 Service
Captain	Edward M. Morris	13 Attack
Captain	William C. Morris	73 Attack
Captain	Devereaux M. Myers	70 Service
1st Lt.	James E. Parker	27 Pursuit
1st Lt.	Charles G. Pearcy	79 Pursuit
Captain	Walter R. Peck	34 Attack
1st Lt.	Donald B. Phillips	14 Bombardment
Captain	Leo F. Post	99 Bombardment
Captain	Carl W. Pyle	76 Service
Captain	Edward W. Raley	5 Bombardment
Captain	George E. Rice	97 Obs. (C & A)
Captain	Harold D. Smith	31 Bombardment
Captain	Rex K. Stoner	36 Pursuit
Captain	George F. Tourtellot	17 Pursuit
Captain	Francis B. Valentine	100 Service
Captain	Alfred E. Waller	35 Pursuit

To the Rank of Captain

Intelligence and Operations Officers

1st Lt.	George R. Acheson	1 Bombardment
1st Lt.	F. Edgar Cheatle	99 Bombardment
2nd Lt.	Philip D. Coates	22 Observation
1st Lt.	Leo H. Dawson	27 Pursuit
1st Lt.	Henry W. Dorr	35 Pursuit
1st Lt.	John P. Doyle, Jr.	5 Bombardment
1st Lt.	John E. Dulligan	34 Attack
1st Lt.	Albert F. Glenn	13 Attack
1st Lt.	Leslie P. Holcomb	15 Observation
1st Lt.	Minton W. Kaye	73 Attack

Intelligence and Operations Officers (Continued)

2nd Lt.	Morris J. Lee	77 Pursuit
1st Lt.	Arthur J. Lehman	97 Obs. (C&A)
1st Lt.	Donald R. Lyon	11 Bombardment
1st Lt.	John H. McCormick	96 Bombardment
1st Lt.	George McCoy, Jr.	90 Attack
2nd Lt.	Douglas T. Mitchell	79 Pursuit
1st Lt.	John G. Moore	31 Bombardment
1st Lt.	John J. Morrow	9 Bombardment
2nd Lt.	Thomas S. Power	20 Bombardment
1st Lt.	Elwood R. Quesada	Hq. Sqdn. GHQ A.F.
1st Lt.	William A.R. Robertson	14 Bombardment
1st Lt.	George F. Schulgen	33 Pursuit
1st Lt.	Robert R. Selway, Jr.	9 Airship
1st Lt.	Archibald Y. Smith	49 Bombardment
2nd Lt.	Sory Smith	55 Pursuit
1st Lt.	John M. Sterling	17 Pursuit
1st Lt.	Robert F. Tate	8 Attack
1st Lt.	Yantis H. Taylor	94 Pursuit
2nd Lt.	Lorry N. Tindall	12 Observation
1st Lt.	Stewart W. Towle, Jr.	21 Obs. (LR Amp)
1st Lt.	Clarence D. Wheeler	36 Pursuit
1st Lt.	Willard R. Wolfenbarger	37 Attack

Engineering Officers - Captains

1st Lt.	Herbert K. Baisley	100 Service
2nd Lt.	Theodore M. Bolen	71 Service
2nd Lt.	Norman R. Burnett	57 Service
2nd Lt.	Philo G. Meisenholder	60 Service
2nd Lt.	Samuel O. Redetzke	62 Service
1st Lt.	Charles B. Stone III	70 Service
1st Lt.	Milton M. Towner	61 Service
2nd Lt.	Hanlon H. Van Anken	56 Service
1st Lt.	Franklin C. Wolfe	76 Service

Supply Officers - Captains

1st Lt.	Alvord V.P. Anderson	70 Service
1st Lt.	Donald W. Buckman	64 Service
1st Lt.	Lambert S. Callaway	62 Service
2nd Lt.	Robert O. Cork	71 Service
1st Lt.	Joseph C.A. Denniston	61 Service
1st Lt.	Norris B. Harbold	76 Service
1st Lt.	George W. McGregor	100 Service
2nd Lt.	William C. Mills	60 Service
2nd Lt.	George F. Schlatter	57 Service
2nd Lt.	Morley F. Slaght	56 Service

Supply Officers - Captains

Group Organizations

1st Lt.	Thurston E. Baxter	20 Pursuit
1st Lt.	Demas T. Crow	9 Bombardment
1st Lt.	Dale D. Fisher	2 Bombardment
1st Lt.	Kirtley J. Gregg	17 Attack
2nd Lt.	James P. Newberry	12 Observation
1st Lt.	Edgar T. Noyes	7 Bombardment
2nd Lt.	Herbert H. Tellman	1st Pursuit
2nd Lt.	Lawrence C. Westley	3 Attack
1st Lt.	Roger V. Williams	19 Bombardment
1st Lt.	Russell A. Wilson	8 Pursuit

Addenda

1st Lt.	Cecil E. Henry	67 Service Sq.
---------	----------------	----------------

To temporary rank of Captain



OFFICERS ADVANCED TO RANK OF MAJOR

Intelligence and Operations Officers

	Group
Captain Charles C. Chauncey	3 Attack
Captain Ira C. Eaker	17 Attack
Captain Harold H. George	8 Pursuit
Captain Oliver P. Gothlin, Jr.	20 Pursuit
Captain William S. Gravely	12 Observation
Captain Harold M. McClelland	19 Bombardment
1st Lt. Earlan T. McCormick	1 Pursuit
Captain Walter J. Reed	9 Bombardment
Captain Lewis R.P. Reese	7 Bombardment
Captain Earl S. Schofield	21 Airship

Headquarters G.H.Q. Air Force, Langley Field

Captain Eugene L. Eubank
 Assistant to Assistant Chief of Staff, G-3
 Captain Lawrence P. Hickey
 Assistant to Assistant Chief of Staff, G-1
 1st Lt. Charles H. Howard, Communications Section.
 Captain Arthur K. Ladd
 Assistant to Assistant Chief of Staff, G-4
 Captain Clements McMullen
 Assistant to Assistant Chief of Staff, G-3
 Captain Ennis C. Whitehead
 Captain John F. Whiteley
 Assistant to Chief, Inspection Section.

OFFICERS ADVANCED TO RANK OF CAPTAIN

Assistant Operations Officers

1st Lt. Joe L. Loutzenheiser	1st Wing
1st Lt. Dwight B. Schannep	2nd Wing
1st Lt. Nathan F. Twining	3rd Wing

Adjutant

1st Lt. Hoyt L. Prindle	2nd Wing
-------------------------	----------

Engineer and Armament Officers

	Group
1st Lt. Henry M. Bailey	3 Attack
1st Lt. Donald F. Fritch	8 Pursuit
1st Lt. Wentworth Goss	19 Bombardment
1st Lt. John N. Jones	9 Bombardment
1st Lt. Cornelius E. O'Connor	2 Bombardment
2nd Lt. Edwin S. Perrin	17 Attack
2nd Lt. Clark N. Piper	1 Pursuit
2nd Lt. Edwin W. Rawlings	12 Observation
1st Lt. James W. Spry	7 Bombardment
1st Lt. John A. Tarro	21 Airship
1st Lt. Manning E. Tillery	20 Pursuit

Flight Commanders

	Squadron
1st Lt. Walter R. Agee	11 Bombardment
1st Lt. Earl W. Barnes	55 Pursuit
1st Lt. William C. Bentley, Jr.	96 Bomb. C Flt.
1st Lt. Ralph O. Brownfield	15 Observation
1st Lt. Walter G. Bryte, Jr.	41 Obs. B Flt.
1st Lt. Cecil E. Archer	32 Bomb. 2d Flt.
1st Lt. Robert E.L. Choate	49 Bomb. C Flt.
1st Lt. Frank J. Coleman	94 Pursuit
1st Lt. Raymond E. Culbertson	53 School
1st Lt. James K. DeArmond	5 Bombardment
1st Lt. Daniel C. Doubleday	27 Pursuit
1st Lt. Richard I. Dugan	88 Obs. 3d Flt.
1st Lt. James A. Ellison	79 Pursuit

Flight Commanders (Continued)

	Squadron
1st Lt. Homer W. Ferguson	53 School
1st Lt. Rudolph Fink	17 Pursuit
1st Lt. Ralph E. Fisher	16 Obs. A Flt.
1st Lt. Karl G.E. Gimmmler	27 Pursuit
1st Lt. Frederick E. Glantzberg	20 Bomb. A Flt.
1st Lt. Charles G. Goodrich	36 Pursuit
1st Lt. William T. Hefley	22 Obs. 1st Flt.
1st Lt. LeRoy Hudson	22 Obs. 2d Flt.
1st Lt. Paul M. Jacobs	17 Pursuit
1st Lt. Paul H. Johnston	99 Bombardment
1st Lt. Donald J. Keirn	9 Bombardment
1st Lt. Robert H. Kelly	12 Obs. 2d Flt.
1st Lt. Reuben Kyle, Jr.	12 Obs. 1st Flt.
1st Lt. Charles W. Lawrence	52 School
1st Lt. John F. McBlain	52 School
1st Lt. Carl B. McDaniel	46 School
1st Lt. Thomas B. McDonald	77 Pursuit
1st Lt. A.J. Kerwin Malone	95 Attack (A)
1st Lt. George P. Moody	1 Bombardment
1st Lt. Charles T. Myers	47 School
1st Lt. Emmett O'Donnell, Jr.	94 Pursuit
1st Lt. John J. O'Hara, Jr.	22 Obs. 3d Flt.
1st Lt. James F. Olive, Jr.	5 Bombardment
1st Lt. Budd J. Peaslee	35 Pursuit
1st Lt. David M. Schlatter	52 School
1st Lt. William L. Scott, Jr.	96 Bomb. A Flt.
1st Lt. Luther S. Smith	43 Pursuit (A)
1st Lt. Milton J. Smith	12 Obs. 3d Flt.
1st Lt. Edgar A. Sirmyer, Jr.	33 Pursuit
1st Lt. John T. Sprague	49 Bomb. A Flt.
1st Lt. Allen R. Springer	36 Pursuit
1st Lt. Fred O. Tally	8 Attack
1st Lt. Edgar R. Todd	96 Bomb. B Flt.
1st Lt. Walter E. Todd	27 Pursuit
1st Lt. Robert F. Travis	49 Bomb. B Flt.
1st Lt. Louie P. Turner	37 Attack
1st Lt. Lee Q. Wasser	94 Pursuit
1st Lt. Robert B. Williams	30 Bomb. A Flt.
1st Lt. Charles G. Williamson	31 Bombardment
1st Lt. Harry E. Wilson	33 Pursuit

Operations Officer

1st Lt. Edmund C. Lynch	A.C. Primary Flying School
-------------------------	----------------------------

OFFICERS ADVANCED TO RANK OF FIRST LIEUTENANT

(All Second Lieutenants)

	Group
<u>Adjutants</u>	
Thomas C. Darcy	8th Pursuit
John H. Ives	2nd Bombardment
Joe W. Kelly	1st Pursuit
Henry K. Mooney	20th Pursuit
Edward W. Suarez	7th Bombardment
<u>Communications Officers</u>	
Oliver S. Picher	35th Pursuit Sqdn.
<u>Radio Officers</u>	
John P. McConnell	20th Pursuit Group
<u>Photographic Officers</u>	
Kenneth B. Hobson, Comdg.	23d Photo Section
James F. Thompson, Jr.	Photo. Officer, 1st Sec.
<u>Armament Officers</u>	
<u>Squadrons</u>	
William J. Bell	56th Service
Paul W. Blanchard	57th Service
	V-6777, A.C.

Armament officers (Continued)

Leon R. Brownfield	15th Observation
Frederick E. Calhoun	13th Attack
Robert L. Carver	55th Pursuit
Kenneth R. Crosher	8th Attack
Loren B. Hillsinger	62nd Service
Harvey P. Huglin	90th Attack
Harold R. Maddux	79th Pursuit
Romulus W. Puryear	77th Pursuit
John R. Sutherland	20th Bombardment

Engineering Officers

Milton W. Arnold	90th Attack
Jesse Auton	73rd Attack
Joseph W. Baylor	99th Bombardment
John H. Davies	13th Attack
Richard A. Grussendorff	37th Attack
Marvin L. Harding	9th Bombardment
John T. Helms	95th Attack
David H. Kennedy	49th Bombardment
Hugh F. McCaffery	Hq. Sqdn. GHQ A.F.
Joseph A. Miller	96th Bombardment
Ernest Moore	77th Pursuit
David N. Motherwell	79th Pursuit
William O. Senter	20th Bombardment
Carl R. Storrie	88th Obs. L.R. Amph.
Dean C. Strother	35th Pursuit
Edward J. Timberlake	40th Attack
Birrell Walsh	31st Bombardment

Supply Officers

Charles H. Anderson	17th Pursuit
George D. Campbell, Jr.	88th Obs. L.R. Amph.
James H. Cunningham, Jr.	5th Bombardment
Carl F. Damberg	97th Obs. (C & A)
Gabriel P. Disosway	55th Pursuit
William M. Garland	31st Bombardment
Paul R. Gowen	77th Pursuit
Archibald J. Hanna	33rd Pursuit
Hunter Harris, Jr.	34th Attack
Richard T. King, Jr.	9th Bombardment
Lester L. H. Kunish	8th Attack
Stephen B. Mack	79th Pursuit
Andrew Meulenberg	15th Observation
Proup Miller, Jr.	20th Bombardment
Berkeley E. Nelson	36th Pursuit
Boyte O. Ross	35th Pursuit
James S. Sutton	73rd Attack
Thomas L. Thurlow	30th Bombardment

STATION COMPLEMENTSCommanding Officers to Lieutenant-Colonel

Major Eugene A. Lohman	March Field
Major Martin F. Scanlon	Bolling Field

Commanding Officers to Major

Captain Fred C. Nelson	Selfridge Field
------------------------	-----------------

Executive Officers to Major

Captain Bernard T. Castor	March Field
Captain Angier H. Foster	Barksdale Field
Captain Albert M. Guidera	Langley Field
Captain Dol L. Hutchins	Hamilton Field
Captain Horace N. Heisen	Rockwell Field
Captain James C. Shively	Scott Field
Captain Clarence C. Wilson	Mitchel Field

Engineering Officers to Major

Captain Harold W. Beaton	Rockwell Field
Captain Hugh C. Downey	Mitchel Field
Captain Albert C. Foulk	March Field
Captain Edward V. Harbeck, Jr.	Barksdale Field
Captain Aubrey Hornsby	Bolling Field
Captain James T. Hutchison	Langley Field
Captain Guy Kirksey	Hamilton Field
Captain Michael E. McHugo	Scott Field

Supply Officers to Major

Captain Shiras A. Blair	Mitchel Field
Captain George G. Cressey	Scott Field
Captain Robert H. Finley	Rockwell Field
Captain Alfred Lindeburg	Barksdale Field
Captain George G. Lundberg	Bolling Field
Captain Jesse A. Madarasz	March Field
Captain Harold A. McGinnis	Langley Field

Engineering Officers to Captain

1st Lt. Ernest K. Warburton	Selfridge Field
2nd Lt. Harold W. Grant	Brooks Field

Supply Officers to Captain

1st Lt. Alfred A. Kessler, Jr.	Selfridge Field
--------------------------------	-----------------

Adjutants to Captain

1st Lt. Wilbur Erikson	Hamilton Field
1st Lt. Walter W. Gross	Rockwell Field
1st Lt. Joseph G. Hopkins	Barksdale Field
1st Lt. Milton M. Murphy	March Field
1st Lt. Earle E. Partridge	Selfridge Field
1st Lt. William L. Ritchie	Scott Field

Operations Officers to Captain

1st Lt. Harold Brand	Rockwell Field
1st Lt. Paul H. Kenner	Hamilton Field
2nd Lt. Robert S. Macrum	Brooks Field
1st Lt. Howard Moore	Mitchel Field
1st Lt. Richard E. Nugent	Langley Field
2nd Lt. Minthorne W. Reed	Selfridge Field
1st Lt. Pearl H. Robey	Barksdale Field
1st Lt. Robert L. Schoenlein	March Field

Signal Officers to 1st Lieutenant

2nd Lt. Millard L. Haskin	Mitchel Field
2nd Lt. David W. Hutchison	Selfridge Field
2nd Lt. Millard Lewis	Hamilton Field
2nd Lt. Harold L. Smith	March Field
2nd Lt. Stanley R. Stewart	Brooks Field

Meteorological Officers to 1st Lieutenant

2nd Lt. Anthony E. Curcio	Rockwell Field
2nd Lt. Harry H. Geoffrey	Mitchel Field
2nd Lt. Torglis G. Wold	Selfridge Field

---oOo---

ASSIGNMENT OF GRADUATES OF A.C. TECHNICAL SCHOOL

Upon completion of their present course of instruction at the Air Corps Technical School, Chanute Field, Rantoul, Ill., the following-named Air Corps officers are assigned as follows: 1st Lts. Samuel V. Stephenson to Selfridge Field, Hilbert M. Wittkop to Randolph Field, 2nd Lieuts. Kurt M. Landon to Scott Field, Daniel W. Jenkins to Barksdale Field and Roy T. Wright to Brooks Field.



RANDOLPH FIELD'S PART IN ARMY DAY CELEBRATION

On the night of April 5th, a 12-ship formation from Randolph Field, Texas, fully illuminated, together with three ships of each type used at Kelly Field, flew over San Antonio in honor of Army Day. A radio program was broadcast from one of the Bombers from 8:00 to 8:15, which was picked up and re-broadcast by radio station KTSA. It also went over the Southwest Net Work.

On the following day, April 6th, Army Day, Randolph Field flew a "USA" formation over San Antonio. Forty-eight ships were used to form the letters U, S and A. In addition, a 15-ship formation and a 3-ship formation were flown over the city at the same time.

For the remainder of the day, Randolph Field kept open house for the public, and airplanes were kept on the line for inspection.

As tending to show the enthusiasm with which the San Antonio public received the U S A formation, the following poem, by Mrs. C.A. Laufenburg, which was sent to the Randolph Field's Officers' Club, is quoted:

W I N G S

Nothing so great nor grand can compare,
To the majestic flight of our fleet in the air,
Flying the unknown ways on high,
With eagle wings of steel in the sky,
Watching in rapture the wonderful way,
That Randolph forms the U. S. A. -
Out of the shining ships made of steel,
Yearning to tell you how proud we feel,
As we stand at attention and upward gaze,
At the parade of ships along the sky-ways,
With hearts overflowing we upward fling,
To the men on high, a hymn we sing -
Of praise for an army, with men like these
That fly our fortress on liberty's breeze,
A defense for our country, the pilgrim's pride
An honor to those who for freedom have died.
And if to the unknown ways on high -
The bugle call came to do and to die,
We can see you fly o'er rocks and rills,
O'er mountain tops' and our home land hills,
To hold this Union so strong and great -
For freedom's cause, that no other fate,
Can o'ertake our land as long as you fly,
So bravely those ships of steel thry the sky,
We take off our hats to the wings of the air
And reverently bow our heads in prayer -
That war shall be ended and Liberty stand -
With its torch of faith, secure in our land.

---oOo---

1ST WING, GHQ AIR FORCE, IN ARMY DAY CELEBRATION

Saturday, April 6th, found all units of the First Wing participating in the activities of Army Day. A composite squadron of Pursuit planes under Captain Ira C. Eaker flew over the Metropolitan district, and, landing at Grand Central Air Terminal, remained on display during the afternoon. The 95th Attack Squadron was dispatched to Hamilton Field and

accompanied the 7th Bombardment Group in aerial maneuvers over San Francisco and vicinity. Miscellaneous aircraft of the Group appeared at various other airports throughout Southern California. Again, at night, the Pursuit planes engaged in a mock attack on the established camp at Griffith Park, Los Angeles. Newspapers reported that 100,000 people witnessed the demonstration at the Grand Central Airport.

---oCo---

CONCENTRATION OF FIRST WING, GHQ AIR FORCE

April 13th marked the largest concentration yet to be effected by the 1st Wing. Units participating in the maneuvers were the Bombardment Groups from Hamilton and Rockwell Fields, the Attack Group from March Field, and the 88th Observation Squadron from Brooks Field, Texas. Ninety tactical planes in all were present for the exercises, which lasted two days.

On Sunday, the 14th, one of the largest crowds ever assembled on March Field saw the units engage in an aerial review for Brigadier-General H.H. Arnold, who had returned from Washington after receiving the Mackay Trophy. Later in the day, Major-General Paul B. Malone, Commanding Officer of the 9th Corps Area, arrived at March Field and was guest of honor at the Wing Smoker held that night and attended by all officers of the 1st Wing present on the field.

General Malone demonstrated his exceptional ability as a public speaker in an address at the banquet in which he expressed the amiable feeling of the line branches toward the Air Corps, emphasizing the fact that the success of the entire army depended on the unity of purpose and action of its various divisions.

The next day, General Malone made a tour of the station, inspecting equipment, installations, and troops of the Station Complement, and receiving an aerial review by the tactical units. In addressing General Arnold, General Malone remarked that it was the best demonstration of flying he had ever seen in the Air Corps. Following the review, visiting organizations left for their home stations, with the next concentration date set as May 4th.

---oCo---

WORLD WAR PIGEON STILL ENJOYS GOOD HEALTH

It appears that the last resting place of Stumpy John Silver, famous World War pigeon, is to be the Aeronautical Museum at Wright Field, Dayton, Ohio. The Hawaiian Air Depot received word to that effect from the Chief of the Materiel Division. An inquiry directed to the pigeon lofts at Schofield Barracks, T.H., regarding Stumpy John revealed that he is still enjoying good health, despite his ripe old age of 18 years, so no definite date can be established as to when he will be taken to a taxidermist and ultimately shipped to his last resting place.

V-6777, A.C.

AIRSHIP TAKES OFF ON WHEELS

Recent tests were conducted at Langley Field, Va., for the purpose of determining how large a load could be lifted aerodynamically by applying the airplane principle of take-off to airships of the non-rigid type.

Until wheels were mounted under the airship, it had been customary to rely almost entirely upon the buoyancy of the lifting medium to raise the ship sufficiently clear of the ground before applying the power of its engines. With the advent of wheels, it was soon discovered that a slightly heavy ship could "weather" minor shocks of the terrain and lift its load to flying altitude. The tests referred to were conducted with the TC-13 Airship (365,000 cubic feet capacity) equipped with two 375 horsepower geared engines, and the purpose was to determine to what extent the principle of aerodynamic lift could be applied to airships in taking off and the range increase to be expected therefrom.

The heavy take-offs were started at 1537 pounds with various conditions of "trim." It was noted that with light loadings the nose had to be trimmed down to overcome the thrust of the propellers as power was applied; that as the loads were increased the effect of propeller thrust became negligible, and unless the load was placed in the rear of the center of gravity an excessively long run had to be made before the elevators would take effect. The maximum load carried was 3,500 pounds with the nose trimmed "up" one degree and the engines running at full throttle. The length of the run was 375 feet, and the time 21 seconds. The speed at take-off was 40 m.p.h. (indicated).

In the second run with the ship loaded 1869 pounds heavy only and the nose trimmed down two degrees, the length of the run was 715 feet, the time 33 seconds and the air speed 64 m.p.h. at take-off.

These take-offs were made on the grass field adjoining the airship hangar at Langley Field. A drenching rain had soaked the field. Under these conditions, the excess loading of 3500 pounds appeared to be near the peak, as the rudders came dangerously close to striking the ground. However, a smooth, hard landing surface would no doubt slightly increase the loads which may be lifted aerodynamically.

In comparing the relative merits of the two methods of taking off airships, statically and aerodynamically, the latter method indicated that an additional 580 gallons of fuel can be carried. This increases the endurance of the TC-13 by 26 hours at 50 miles air speed. Its range in still air is increased by 1300 miles.

6th COMPOSITE GROUP IN PANAMA MANEUVERS

The annual maneuvers in the Panama Canal Department, in which the 6th Composite Group, Air Force, participated, have just been concluded. Lieut.-Col. L.H. Brereton, normally the Commanding Officer of the Group, was Commanding Officer of the mobile air force in the field of the Brown mobile force commanded by Major-General Lytle Brown. Lieut.-Colonel J.H. Houghton acted as Group Commander. Personnel from France Field, comprising 24 officers and 205 enlisted men, took the field.

All personnel and equipment were ferried to advanced airdromes by air transportation. This, considering the shortage of airplanes, was quite an accomplishment. Both officers and enlisted men subsisted on the field ration (iron) which consisted largely of hard tack and cheese and more hard tack and cheese. However, it was found that a hard day in the field and a little manipulation in its preparation made the ration fairly edible.

The 6th Composite Group camp at LaJoya was situated on the Arias Ranch, near the Pacora River. This river was utilized for swimming; in fact, even bathing. A fine rocky pool was discovered and utilized by almost everyone until one afternoon, when our intrepid local hunter and flight surgeon, Captain W. M. Scott, popped off a 7-foot crocodile who had joined and was mingling with the bathers.

Captain W.J. Davies was also slightly nonplussed on one occasion upon finding a fer-de-lance snake resting in his parachute.

Captain J.F. Guillett is now known as "Little Garcia," having distinguished himself by accepting a message from Col. Brereton for delivery to General Brown and then dashing off down the road on a motorcycle, completely passing up General Brown and disappearing in a cloud of dust and falling in the hands of the enemy. General Brown dryly remarked: "Some day that young man will get hungry and come back to eat, and we will find out what is in the message."

Other than the normal run of camp incidents, a few scorpions and the usual amount of tropical bugs, a good time was had by all. The morale was excellent, and certainly the command as a whole has been considerably hardened up. The maneuvers ended with a Department Review in honor of President Harmodio Arias of Panama. Some 8,000 troops with vehicles, animals and airplanes participated in the Review.

---oOo---

Among the new officer arrivals at France Field, Panama, are Major Richard H. Ballard, Capt. George R. Geer, 1st Lt. William H. McArthur, 2nd Lt. Richard M. Montgomery, A.C., and Capt. Kenneth A. Brewer, Medical Corps.

V-6777, A.C.

PHILIPPINES A HUNTER'S PARADISE By Captain Richard D. Reeve, A.C.

Many officers coming to the Philippines are not acquainted with the fact that these islands are a hunter's paradise. They are often advised to leave their firearms at home when in reality, if one loves the chase, he should bring all his guns with him.

Many different varieties of bird and game shooting are to be found throughout the group of islands. In the vicinity of Manila and on Nichols Field, in fact, excellent snipe shooting is to be had in the fall of the year. And are they good eating! In all other parts of the islands away from the settled areas, excellent pig and deer shooting is to be had. Officers hunting in the northern provinces have reported seeing from fifty to seventy-five in a day. They range in size, varying from 60 to 250 pounds, depending on the region and forage. Wild pig will run from 50 to 400 pounds. Monster pig, probably the real wild boar species, have been reported killed on the Island of Palawan, ranging up to 500 pounds, with tusks a good 8 or 9 inches long.

The real deluxe hunting is to be found on the Island of Mindoro, the only place in the world where the tamaraw is found. It is a species of buffalo, weighing from 400 to 700 pounds, resembling the carabao except for the fact that it lives in the hills and mountains rather than the swampy plains, as do the buffalo. They are extremely wild and fierce. Hunting parties in the past few years have reported various encounters. One officer, charged by two of them, killed one at 1500 feet and the other at 20 feet. The writer on a trip last year saw a wounded tamaraw charge a native beater, goring him in the chest, with the result that the Filipino spent three months in the hospital. This year a native Manyan escaped the charge of a tamaraw only through being just a little too quick. Deer and wild pig are also plentiful. A party recently returned with four nice heads, also many deer and pigs. Hunting is very difficult because of the extreme heat and the rough country traversed.

In the Mindanao province excellent duck hunting is to be found. Several hunters have returned with nice bags.

Excellent deep sea fishing is also to be had. The writer is not an authority on that subject. However, you fishermen bring all your equipment, otherwise you will miss a lot.

---oOo---

An "Aloha" flight in honor of Major General Hugh A. Drum, was staged by Army pilots from Wheeler Field upon the occasion of his arrival to assume command of the Hawaiian Department. Following a Wing Review over the Transport REPUBLIC, Pursuit units passed over forming a huge letter "D."

19th COMPOSITE WING IN PANAMA MANEUVERS

The work of the 19th Composite Wing during the annual maneuvers of the Panama Canal Department was highly praised by the Commanding Generals of both sides, Major-General Lytle Brown (the Brown Commander) and Brigadier-General John W. Gulick (the Blue Commander), at a critique attended by all officers of the Department at the end of practically a month of strenuous field activities.

The maneuvers began on March 6th, and during the first phases the Wing operated from its home stations, Albrook Field and France Field. During the latter phase, the 6th Composite Group was attached to the Mobile Force (Brown) attacking the Zone from a base at Chepo, Republic of Panama, while the 16th Pursuit Group (44th Observation Squadron attached) was attached to a Provisional Coast Artillery Brigade (Blue), the defender. Without interruption of operations, the 6th Composite Group moved by air and truck first to Chepo and then to a field at LaJoya. The 16th Pursuit Group, also without interruption of its operations, moved to a field at La Chorrera.

The maneuvers served to emphasize the necessity for adequate and prompt means for communicating between the commanders on the ground and the observers in the air.

The maneuvers closed with a review on March 30th, when approximately 8,000 troops were massed at Albrook Field. The 19th Composite Wing participated on foot, in motor vehicles and in the air. The ground element, formed as three infantry battalions and a convoy of 83 motor vehicles, was commanded by Lieut.-Colonel Junius H. Houghton, while the air element, comprising the entire aircraft strength of the Panama Canal Department, was commanded by Colonel McChord, flying a P-12E.

---oOo---

FLYING TRAINING FOR YOUNG MEN IN ITALY

According to reports, of the total of 438 young Fascists who were enrolled during 1934 for training as pilots, 391 qualified, 46 were eliminated for various reasons and one was killed. These students made 53,644 flights for a total flying time of 10,212 hours.

It is interesting to note that practically 90% of student pilots enrolled were brevetted as "pre-military pilots." The average time was approximately 25 flying hours per student.

Upon being called for military service (during 21st year age) these "pre-military pilots" will be sent to the central flying school now at Grottaglie. At this school an additional course of about 50 hours flying with transition to service types is given. The successful

pilots are then rated "military pilots" and sent to Specialty schools (pursuit or bombardment) or to combat squadrons for additional flying training and eventually squadron flight duty.

---oOo---

FLIGHTS BY FIRST PURSUITERS ON ARMY DAY

The First Pursuit Group, Selfridge Field, Mich., staged two tactical problems on April 6th (Army Day) for the purpose of performing demonstration flights over Detroit and Chicago. The first flight took off at 11:00 a.m., under the command of Captain George P. Tourtellot, and consisted of 18 P-26A Pursuit planes. This squadron performed a tactical mission during the period 11:00 - 11:45 a.m., rendezvousing over Detroit at 11:50 and flying over the line of march at exactly 12:00 noon. This completed, the squadron continued the original mission and landed at the home airdrome 12:45 - 1:15 p.m.

A second flight of 18 P-26A planes took off from Selfridge Field at 1:30 p.m., under the command of Lieut.-Col. Ralph Royce and worked a tactical problem en route to Chicago, Ill., timing their arrival there so as to fly over the parade at 3:30 p.m. This flight was grounded in Chicago from April 6th to 9th, due to bad weather - heavy dust and rain storms. None of the pilots in the earlier flight on Army Day participated in the second flight, due to the shortage of airplanes and the desire to have training progress as evenly as possible for all pilots of the Group.

---oOo---

ANOTHER ERRAND OF MERCY FOR ARMY AIRMEN

The value of the airplane as an ambulance, especially in countries where roads are few and difficult, was again demonstrated by personnel of the 19th Composite Wing, Albrook Field, Panama Canal Zone, on the night of April 5th. Shortly before dusk, the Commanding Officer of Company A of the 11th Engineers telephoned from Agua Dulce, Republic de Panama, to the Commanding Officer of Albrook Field that one of his soldiers was in a critical condition and was not expected to survive the night unless he could receive hospital treatment.

Despite the fact that there are no lighted airways across the jungles of Panama, lighted fields or even lights brighter than kerosene burners in the towns themselves, Captain H.E. Rice, pilot, with Major C.L. Chase, Flight Surgeon, and Staff Sergeant Roby C. Davis, 29th Pursuit Squadron, Crew Chief, took off for Agua Dulce in a C-9. It was "just" dark when the transport landed in the unlighted field

at Agua Dulce and took on board the patient, Sergeant A.J. Schaffler, a member of a mapping detail.

Captain Rice negotiated the take-off from the unlighted field without incident and covered the 100 miles to Albrook Field within an hour. The soldier was rushed to the Gorgas Hospital where it was determined that, after all, he was not suffering from appendicitis. However, he was a very sick man and his physicians agree that he would not have survived the night had the C-9 not negotiated the night flight over the jungles.

---oOo---

WAR DEPT. ORDERS AFFECTING AIR CORPS OFFICERS

CHANGES OF STATION: To Randolph Field, Tex.: Brig. Gen. James E. Chaney, from Office of the Chief of the Air Corps, to assume command of the Air Corps Training Center.

To Hamilton Field: Capts. Carlyle H. Ridenour and Delmar H. Dunton from Rockwell Field.

To March Field: 2nd Lieut. Lloyd H. Watnee from Hamilton Field.

To Bolling Field: Captain Jack C. Hodgson, upon completion of course of instruction at Army Industrial College.

To Los Angeles, Calif.: Captain B.F. Giles, upon completion of present course of instruction at Air Corps Tactical School, as Instructor of Air Corps, California National Guard.

To Materiel Division, Wright Field: 1st Lt. Paul H. Kemmer, from Hamilton Field.

To Langley Field, Va.: Major Alonzo M. Drake, 80th Service Sqdn., Panama. Relieved from temporary rank upon leaving Panama.

To Maxwell Field: Captain Bayard Johnson, from M.I.T., Cambridge, Mass.

To Rockwell Air Depot: Captain Harold H. Carr from Scott Field.

To Panama Canal Dept.: Capt. Isaac J. Williams, A.C. Detachment, Ft. Lewis, Wash.

To Houston, Texas: Col. Theodore A. Baldwin, for recruiting duty. Previous orders revoked.

To Huntington, W. Va.: 2nd Lt. James H. Cunningham, Jr., from Mitchel Field, assigned to duty with Corps of Engineers.

To Hawaiian Department: Major Hume Peabody, from Army War College, July 30th; 1st Lieut. Kingston E. Tibbetts, from A.C. Technical School, Chanute Field.

PROMOTIONS: To Major: Captain Stephen J. Idzorek, rank from March 24, 1935.

To 1st Lieut.: 2nd Lieuts. George G. Northrup, rank March 24th; Thomas S. Power, March 30th; Lloyd H. Watnee, March 31st; Philip D. Coates, Tulma W. Imlay, John H. Bundy, Mills S. Savage, Harold W. Bowman, Lorry N. Tindal, Merlin I. Carter, James W. Sessums, Jr., Charles K. Moore, Austin A. Straubel and Wycliffe E. Steele, rank from April 1, 1935.

---oOo---

Captain Karl S. Axtater, Scott Field; 1st Lts. Wilfred J. Paul, Langley Field, and John G. Salsman, Fort Bragg, N.C., were ordered to Randolph Field for heavier-than-air training with class starting July 1st next.



GENERAL CHANEY ASSUMES COMMAND OF THE AIR CORPS TRAINING CENTER

The assignment of Brigadier-General James E. Chaney, Air Corps, who for the past four years was on duty in the Office of the Chief of the Air Corps, to the Air Corps Training Center, Randolph Field, Texas, May 1st, to assume command, takes him back to familiar surroundings, for nearly five years ago he completed dividing up a four-year tour of duty at both the Primary and Advanced Flying Schools at San Antonio.

General Chaney was born March 16, 1885, in Maryland. After attending Baltimore City College for three years, he received an appointment to the United States Military Academy.

Upon graduating from West Point in 1908, he was commissioned a 2nd Lieutenant and assigned to duty with the 9th Infantry.

During the period of time between 1908 and 1914, he served a tour of duty in the Philippine Islands, was on duty as an instructor at the U.S. Military Academy for four years, and on duty at the American Embassy, Madrid, Spain, for five months.

Promoted to 1st Lieutenant in July, 1914, he was attached to the 30th Infantry. Six months later, in December, 1914, he was assigned to the 25th Infantry, with station at Schofield Barracks, Honolulu, T.H., where he was in command of a company for two years.

On his next change of station, General Chaney was assigned to duty at Chanute Field, Rantoul, Ill., where he reported on October 16, 1917. He only served several weeks at this station, for on November 6th he was transferred to Columbus, Ohio, and assigned to duty as Commandant of the School of Military Aeronautics, Ohio State University. He had been promoted to Captain on March 22, 1917, and on August 5th of that year received an appointment as Major, Signal Corps.

Transferred to Washington, D.C., on June 12, 1918, he was assigned to duty in the Office of the Director of Military Aeronautics as Executive Officer in the Operations Section. This assignment was of brief duration, for several months later he sailed for duty overseas, and from September 4, 1918, he served with the American Expeditionary Forces, being on duty at Tours; Paris; at the Air Service Production Center No. 2, where he received flying training; with the 3rd Army as Chief Air Service Officer, Service of Supply; as Commanding Officer of the Airdrome at Coblenz, Germany; and as Aviation Officer under the Commanding Officer, Provisional District of Great Britain, at London, England.

From October 8, 1919, to June 5, 1924, General Chaney served as Assistant Military Attache at Rome, Italy, where he was on very cordial terms with the officers directing the Italian Royal Air Force.

Transferred to Langley Field, Va., General Chaney attended the Air Corps Tactical School at that station and graduated in June, 1925. He was then assigned as student at the Command

and General Staff School, Fort Leavenworth, Kansas, from which he emerged in June of the following year as an honor graduate.

From June 24, 1926, to July 15, 1927, he served as Commandant of the Air Corps Primary Flying School at Brooks Field, Texas, and from July 16, 1927, to July 30, 1930, as Commandant of the Advanced Flying School at Kelly Field, Texas.

General Chaney was next assigned as student at the Army War College, Washington, D.C., and upon his graduation from this institution in June, 1931, he was assigned to duty in the Plans Division, Office of the Chief of the Air Corps. He was promoted to Lieutenant-Colonel, February 1, 1932.

From January 29 to June 1, 1932, he was on duty as military adviser to the delegation to the General Disarmament Conference at Geneva, Switzerland.

In the operation of the Air Mail by the Army Air Corps from February to May, 1934, General Chaney was assigned to duty as Executive Officer on the staff of General Westover, Officer in Charge.

General Chaney received his promotion to his present rank on July 17, 1934.

---oOo---

WILEY POST JUST WON'T TALK

Wiley Post paid a visit to the 113th Observation Squadron, Indiana National Guard, at Indianapolis, after he was forced down in his third attempt to make a record coast to coast flight in the stratosphere. According to the News Letter Correspondent, his supercharger went "haywire" when he was somewhere near Cincinnati, Ohio, after his motor had coughed a couple of times. Also, his oxygen equipment was not functioning properly, and in feeding oxygen too rapidly it caused the glass window in his stratosphere helmet to fog up, thus giving him practically no visibility. As he could not get his hands inside the helmet, his only available windshield wiper was his nose. After using his nose as a mechanical accessory to the plane for a considerable length of time, it became somewhat indifferent if not sore, likewise his neck.

Knowing that he had crossed the Indianapolis-Chicago radio beacon line, he began to lose altitude and look for a field, and quite conveniently the Lafayette airport on the Purdue campus came into view. After circling the field a few times to be sure it was clear, and to find a spot smooth enough to land without a landing gear, he sat it down for a perfect belly landing without any damage to the plane.

Capt. L.I. Aretz helped him off with his elaborate headgear, and brought him over to attend our regular drill, accompanied by Dr. Arnet of the State Armory Board. Naturally, we all anticipated an opportunity to hear his story of the flight, but when he modestly declined, we gave him the usual "So you won't talk, eh?" and turned to Capt. Aretz and Dr. Arnet for short talks.

RECIPIENTS OF THE DISTINGUISHED FLYING CROSS

Up to this writing, the following-named personnel have been awarded the Distinguished Flying Cross:

For extraordinary achievement while participating in aerial flight

AIR CORPS

Captain St. Clair Streett

1st Lieut. Erik H. Nelson

1st Lieut. Clarence E. Crumrine

1st Lieut. Clifford C. Nutt

1st Lieut. Ross C. Kirkpatrick (posthumously)

Master Sergeant Joseph E. English

Sergeant James D. Long

Alaskan Flying Expedition. Pioneering flight from Mitchel Field, L.I., New York, to Nome, Alaska, and return, July 15-October 15, 1920.

1st Lieut. James H. Doolittle

On September 4 - 5, 1922, he accomplished a one-stop flight from Pablo Beach, Fla., to San Diego, Calif., in 22 hours and 30 minutes elapsed time, an extraordinary achievement with the equipment available at that time. By his skill, endurance and resourcefulness he demonstrated the possibility of moving Air Corps units to any portion of the United States in less than 24 hours.

Captain John A. Macready

1st Lieut. Oakley G. Kelly

For successfully completing the first non-stop flight across the American continent in the history of aviation. Departed from Mitchel Field, N.Y., at 12:36 p.m., May 2, 1923, in the Army airplane T-2. Encountering practically every hazard of flying, and displaying remarkable ingenuity, skill and perseverance in overcoming the many handicaps imposed upon them by the elements and the mechanical equipment used, they arrived at Rockwell Field, Coronado, Calif., at 12:26 p.m., May 3, 1923.

Captain Lowell H. Smith

1st Lieut. John P. Richter

Pioneers in establishing the practicability of refueling airplanes while in flight. On June 28-29, 1923, they piloted an airplane refueled in flight for 37 hours, 15 minutes, 14-4/5 seconds, breaking the endurance record, the speed records from 2500 to 5,000 kilometers, and the distance record (5300 kilometers).

1st Lieut. Russell L. Maughan

For fastest time ever made by man between New York and San Francisco. Departed from Mitchel Field, N.Y., at 2:58 a.m. EST, June 23, 1924, in a modified Pursuit type airplane on Dawn to Dusk flight and landed at Crissy Field, Presidio of San Francisco, Calif., at 9:47 p.m., Pacific time, same date. Flew 2540 miles in 21 hours, 48 1/2 minutes.

1st Lieut. Harry A. Sutton

Between December 15 to 22, 1926, at Santa Monica, Calif., Lieut. Sutton, at great personal hazard, piloted an O-2 airplane in tests to determine the spinning characteristics of this type of plane, which resulted in invaluable data being made available to airplane designers. These tests were voluntary and above the call of duty.

Major Herbert A. Dargue

Captain Ira C. Eaker

Captain Arthur B. McDaniel

Capt. Clinton F. Woolsey (posthumously)

1st Lt. John W. Benton (posthumously)

1st Lieut. Muir S. Fairchild

1st Lieut. Charles McK. Robinson

1st Lieut. Leonard D. Weddington

1st Lieut. Ennis C. Whitehead

1st Lieut. Bernard S. Thompson

For participation in the Pan-American Flight, December 21, 1926, to May 2, 1927. They displayed initiative, resourcefulness and a high degree of skill under many trying conditions encountered throughout the flight. Their tireless energy, sound judgment and personal courage contributed materially to the successful accomplishment of this mission of good will.

Captain Charles A. Lindbergh, Reserve

In recognition of his courage, skill and resourcefulness in piloting unaccompanied "The Spirit of St. Louis" from New York across the Atlantic Ocean to Paris, France, a distance of 3,600 miles, the longest non-stop flight ever made by man.

1st Lieut. Lester J. Maitland, pilot.

1st Lieut. Albert F. Hegenberger,
co-pilot and navigator.

By masterly skill, courage, endurance and tenacity of purpose, they successfully navigated an Army airplane June 28-29, 1927, from Oakland, Calif. to Honolulu, Hawaiian Islands, over the greatest expanse of open sea yet crossed in a non-stop flight. With full knowledge of the dangers and difficulties, they traversed over 2400 miles of the Pacific Ocean with marvelous accuracy of direction and thereby demonstrated conclusively the practicability of accurate aerial navigation.

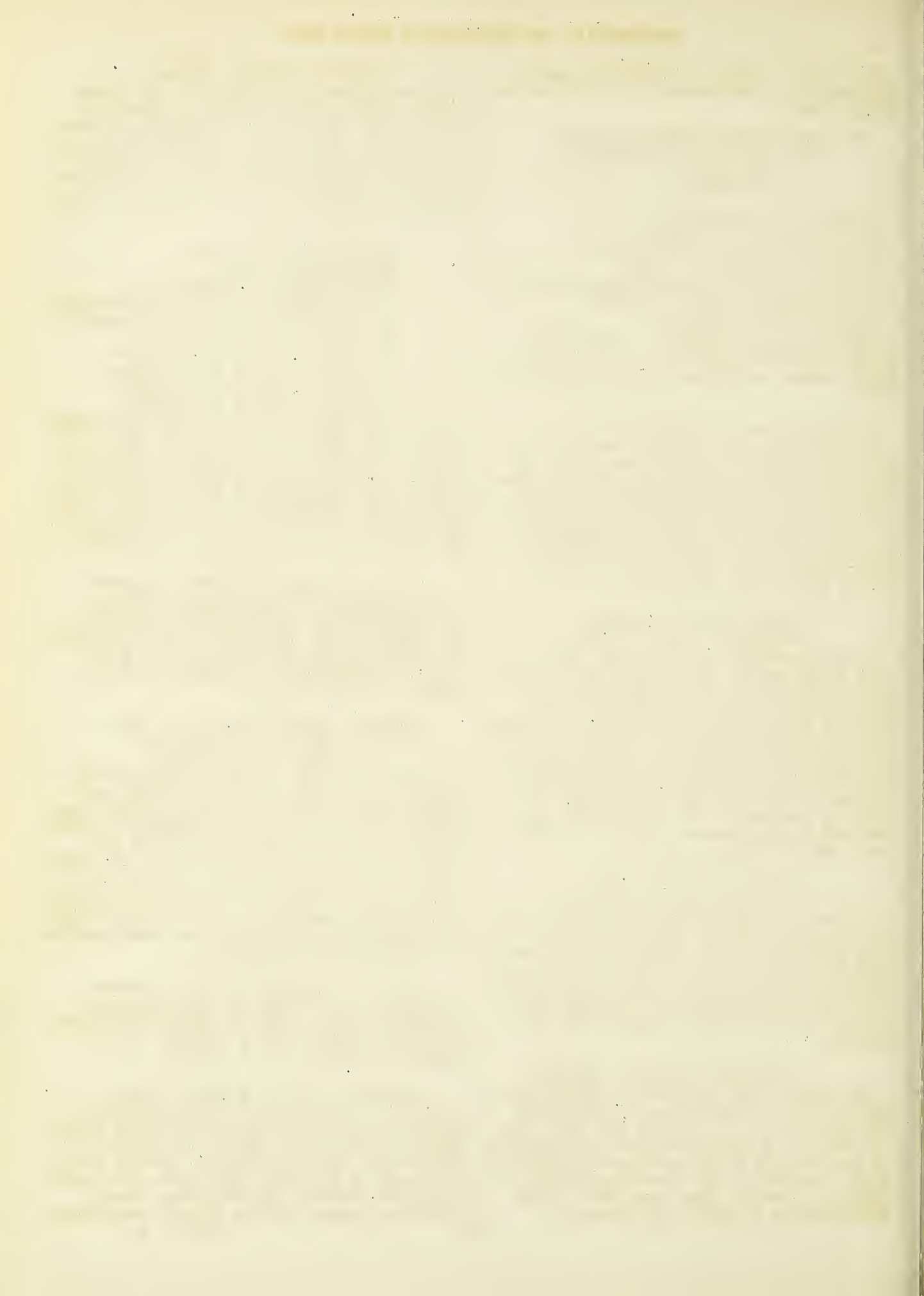
Arthur C. Goebel, 2nd Lieut. Reserve

On August 16-17, 1927, he piloted an airplane on a non-stop flight from Oakland, Calif. to Wheeler Field, T.H., a distance of 2400 miles, in 26 hours and 17 minutes.

1st Lieut. Carl B. Eielson, Reserve

As pilot he accompanied Captain George H. Wilkins (an English subject) from Point Barrow, Alaska, to Dead Man's Island, Archipelago of Spitsbergen, April 15-16, 1928, without stop, a distance of more than 2200 miles. The severity of the weather, the storm area through which they passed, with no hope of outside aid

V-6777, A.C.



in case of a forced landing, and the complete success of the enterprise distinguishes it as one of the most extraordinary accomplishments in aviation history.

2nd Lieut. Dean Cull Smith, Reserve

As one of the pilots of the 1928-1930 Byrd Antarctic Expedition, he made numerous flights over the Antarctic regions in the face of the gravest danger.

Captain Ashley C. McKinley, Reserve

As photographer for the 1928-1930 Byrd Expedition, he participated in the face of the very gravest danger in numerous flights over the Antarctic regions, which culminated in the flight with three companions to the South Pole, November 28-29, 1929.

Major Carl Spatz, Commanding Officer

1st Lt. Harry A. Halverson, Relief Pilot

2nd Lt. Elwood R. Quesada, Relief Pilot

Staff Sgt. Roy W. Hooe, Mechanic

On January 1-7, 1929, they participated in the refueling duration flight of the airplane "Question Mark," at and near Los Angeles, Calif., remaining in the air a total of 150 hours, 40 minutes, 15 seconds, a period of continuous flight longer than any previous flight ever accomplished.

Captain Donald L. Bruner

By his vision, initiative, courage and perseverance, he rendered exceptionally valuable services to the Government of the United States by developing and perfecting night flying equipment, thus making it possible for military and commercial planes to traverse the length and breadth of the United States during the hours of darkness.

Major William E. Kepner, Pilot

Capt. Albert W. Stevens, Scientific Observer

Capt. Orvil A. Anderson, Alternate Pilot and Scientific Observer

After reaching an altitude of 60,613 feet during the National Geographic Society - Army Air Corps Stratosphere Flight, the balloon became disabled. Under the most adverse and hazardous conditions, attempt was made to land the disabled aircraft in order to preserve the scientific records obtained. By the exercise of cool judgment and foresight under these conditions, certain scientific records were saved and the balloon was abandoned only when it was clearly evident that not to do so would prove disastrous to human life.

OTHER PERSONNEL

Capt. Ernest L. Smith, Specialist Reserve

On July 14-15, 1927, he piloted an airplane on a non-stop flight from Oakland, Calif., to the Island of Molokai, Hawaii, a distance of 2340 miles, in 26 hours, 36 minutes, thus first demonstrating the possibility of communication between the United States and the Hawaiian Islands with small commercial planes.

Col. Francesco de Pinedo, Italian Air Force
Successfully negotiated the dangers of Trans-Atlantic flight, courageously crossing the jungles of Brazil and overcoming countless other obstacles, thereby completing a journey of 25,000 miles by flying boat, in the course of which he arrived in the United States in March, 1927, by air from Rome, Italy.

Lieut. Dieudonne Costes, French Army Reserve

Lieut.-Commander Joseph Lebrix, French Navy

For aerial journey of 35,000 miles, in the course of which they arrived in the United States in February, 1928, by air, after making the first non-stop flight across the South Atlantic.

Baron Gunther von Huenefeld, of Germany

Major James Fitzmaurice, Chief of Irish

Free State Air Force

Capt. Herman Koshl, German Army, Retired

On April 12-13, 1928, they succeeded in making the first westward non-stop trans-Atlantic flight from Europe to North America.

Captain Benjamin Mendez, Colombian Army

Between Nov. 23 and Dec. 30, 1928, he piloted an airplane from New York City to Giradot, Colombia, a distance of 4,600 miles. By his skill, resourcefulness and courage, he linked the continents of North and South America by an aerial journey.

Glenn H. Curtiss (Posthumously)

Over a long period of years, Mr. Curtiss, by his initiative, energy and courage, rendered exceptionally valuable services to the government of the United States by experimental flights and in advancing and developing the science of aeronautics.

Wiley Post, Pilot

Harold Gatty, Navigator

For airplane flight around the world, (June 23-July 1, 1931) in 8 days, 15 hours and 50 minutes, thus not only eclipsing in time all previous world flights, but also by their intrepid courage, remarkable endurance and masterly skill materially advancing the science of aerial navigation.

Russell N. Boardman

John L. Polando

For flight, July 28-30, 1931, of 5,011-8/10 miles, non-stop, over the Atlantic Ocean from the United States to Istanbul, Turkey.

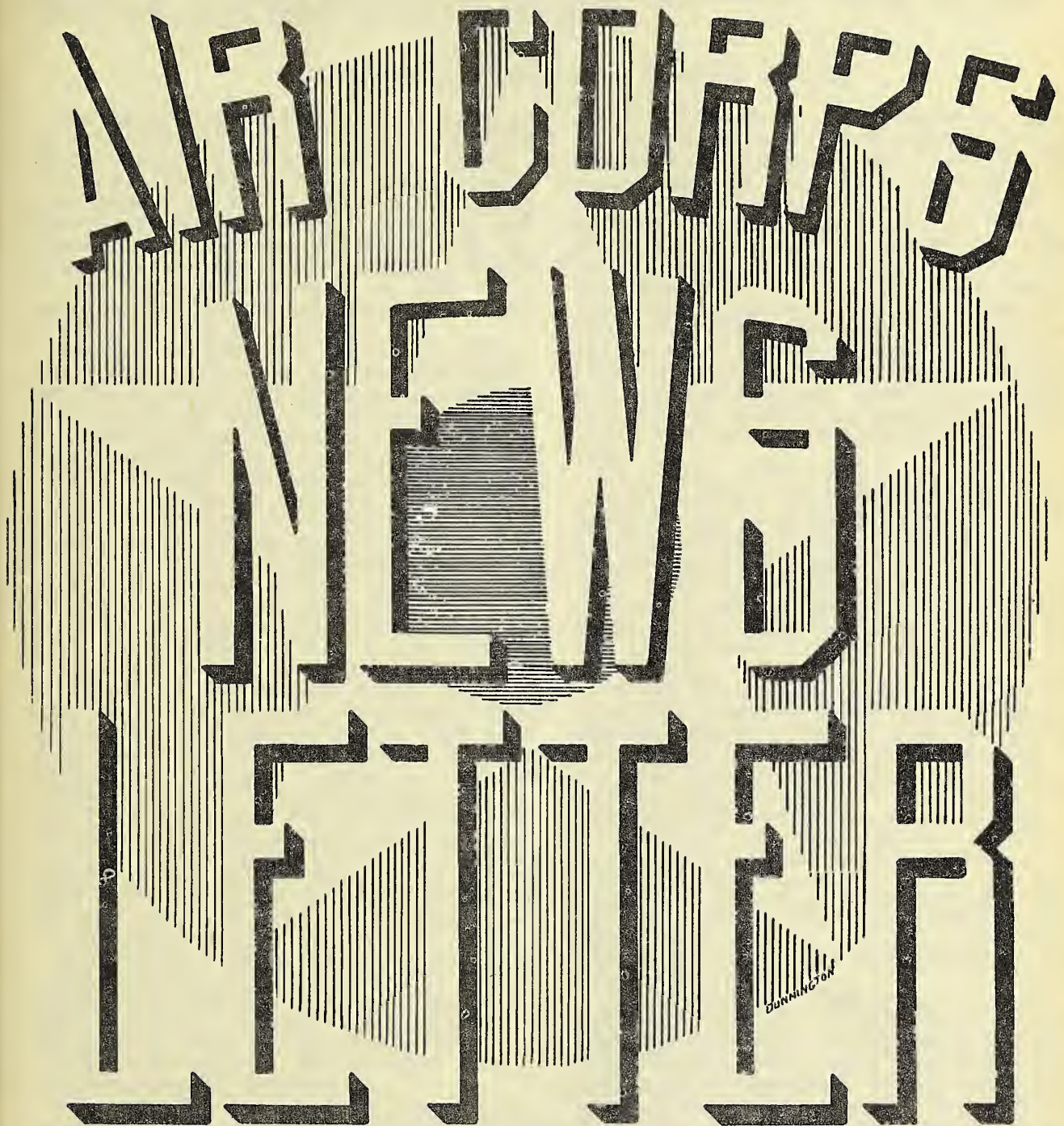
Further awards of the Distinguished Flying Cross will be listed in the next issue.

---oOo---

The following-named Air Corps officers, upon the completion of their present course of instruction at the Army Signal School, Fort Monmouth, N.J., will report not later than June 30th next to stations, as follows:

First Lieut. Norme D. Frost, 2nd Lt. Clarence F. Hegy, to Selfridge Field; 1st Lts. Dudley D. Hale and Warren H. Higgins, Panama; 1st Lts. Stanley K. Robinson, Bolling Field; James F. Walsh, Scott Field; Walter C. White, Mitchel Field; 2nd Lts. W.W. Bowman, Langley Field; O.R. Deering, Barksdale Field and Wm. C. Dolan, Brooks Field.





ISSUED BY THE OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT WASHINGTON, D.C.

MAY 15, 1935



ISSUED BY THE OFFICE OF THE CHIEF OF THE AIR CORPS
WASHINGTON, D.C.

WAR DEPARTMENT

MAY 1937

Information Division
Air Corps

May 15, 1935

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

LONG-RANGE AIRPLANES MOST FLEXIBLE DEFENSE

The long-range airplane will form the future basic element of this country's air force and give the United States its most flexible defense against any challenge from the ocean declared Brig. General Frank M. Andrews, Chief of the General Headquarters Air Force, at the annual aerial membership roundup dinner of the Indiana Department of the American Legion at Indianapolis on the evening of May 1st, last.

General Andrews and scores of other prominent figures in the aeronautical world and civic and government leaders were guests of Frank N. Belgrano, Jr., National Legion Commander, at the Indianapolis Athletic Club.

Stating that the responsible authorities of the War Department are fully alive to the importance of military aviation and to the requirements for the organization, equipment and control of the air force, General Andrews briefly outlined the measures which were instituted by the War Department to effect the creation of the G.H.Q. Air Force, following the approval by the Secretary of War of the report of the Special War Department Committee headed by the Hon. Newton D. Baker. The program contemplated eventually a force of 2320 planes for all purposes, including combat, observation, training, cargo and transport, the GHQ Air Force to be equipped with 980 planes, made up of all air combat units in the continental limits of the United States, in one command directly under the Chief of Staff in time of peace, and of the commander of the Field Forces in war.

Four field armies, with the GHQ Air Force, will constitute the main combat elements of our war forces. The four armies must of necessity be skeletonized in peace and brought up to full strength as quickly as possible when mobilization is ordered.

"The Air Force cannot be improvised after war is imminent," General Andrews stated. "It takes years to build bases and airplanes and to train personnel. The War Department has, therefore, adopted the policy of maintaining the Air Force at all times in a state of readiness for war.

In any war between modern powers an Air Force phase will precede the contact of the ground forces. The outcome of this phase will be very important. The Air Force phase will consist large-

ly of independent air operations, i.e., operations of the GHQ Air Force acting alone or as the principal force in the performance of the mission assigned by the Commander-in-Chief of the Field Forces. These independent air operations will normally be beyond the sphere of influence of the surface forces of the ground or of the sea. They comprise such operations as attack on enemy aviation and aviation bases; attack on hostile naval forces; on choke points in lines of communication, such as railway and highway bridges, canal locks, port facilities; attack on troop concentrations and on war industrial activities, etc.

Of course, if an enemy Air Force should be able to establish itself on bases or has available bases from which it can operate against the United States, it will attempt to carry out the same class of missions, particularly the attack of refineries and factories engaged in the production of munitions, and the attack of power plants and other utilities.

It can be readily seen that the most important operation for the United States Army Air Force is to defeat the enemy aviation. This is ordinarily best accomplished by attacking enemy air bases. One destroys an obnoxious flying pest through the destruction of its breeding or roosting places. Without bases an air force cannot operate.

Our GHQ Air Force, to carry out its function, must also have prepared bases. The more bases, the more flexible the operations, but as a minimum requirement there should be base facilities in every strategic area.

The Wilcox Bill, which has been favorably reported out of the House Military Affairs Committee, provides these air bases and certain other necessary auxiliary establishments. It has the indorsement of the War Department and its enactment into law would add greatly to the effectiveness of the air defenses of the United States in war, and facilitates air training in peace. It deserves universal support."

Outlining briefly the functions of Bombardment, Pursuit and Attack Aviation, General Andrews stated that these branches of aviation must have information upon which to base their operations. Accordingly there are provided a few squadrons of long-range observation, whose duty it

V-6787, A.C.

is to locate and check up on likely targets for the bombardment and attack.

Certain supplies and key personnel must be quickly transported to operating air units as required. Cargo and transport airplanes look after some of the more urgent supply and personnel transport problems.

Asserting that the Army air defense organization which the War Department is building is far from complete, General Andrews goes on to say that time and money and hard work are necessary before the United States will have an effective air defense. At the present time it is only getting under way.

"For example," he said, "the GHQ Air Force has assigned to it about 450 airplanes of all types, less than half its 980 set up in the program. Of the 450, only about 176 are modern and suitable.

The shortage in commissioned personnel presents another serious problem. The GHQ Air Force alone will require when completely equipped with airplanes about 1900 trained pilots, navigators and observers. Today there are available to GHQ units for these duties about 500 Regular officers, Reserve officers and Flying Cadets. Similar conditions exist in other Air Corps activities. Base facilities are inadequate and more are needed.

However, there are bright spots in the outlook - it is not all dark. During the next 18 months for instance, a considerable number of modern combat aircraft will be delivered to the Air Corps equal or superior to anything in the world. In the year following that, still more, but it should be noted that these deliveries are sufficient to provide replacements only for worn out and useless airplanes. They are not sufficient to build up to the number of aircraft required by the approved program.

This program was recommended by the Baker Committee as a minimum for air defense purposes. It should be met in a reasonable length of time to provide adequate National security. For Army aviation, when it is completely organized and equipped will afford a defense weapon of primary importance for the prevention of any oversea invasion of the United States or its possessions.

As time goes on, the increasing range of this extraordinary form of easily controlled fire power will dictate new air defense frontiers and larger spheres of influence for military aviation. Our efforts, therefore, should be to extend the radius of our aircraft to the effective maximum technically practicable, not for the purpose of making the airplane a vehicle of aggression, but rather to subject an aggressor to this form of our defense as far from our homes as possible, and to realize to the fullest the defensive capabilities of

land-based military aviation.

We are not an aggressor nation. Our national policy of defense is well known and is responsible in no small degree for the mutual respect and confidence existing among the nations of North America. Unfortunately for world peace, reverse conditions exist in Europe and Asia. I think you will all agree with me that the aims and ideals of our armed forces, including military aviation, fit harmoniously into the social and economic will of the nation for defense and toward the prevention of war. But notwithstanding this and the fortunate situation existing in our continent, experience has shown us that we may easily become involved in world conflicts. We have no assurance that in our next war the battle ground will be on foreign soil. It is for every contingency that we must prepare.

Commercial and military development of the air and science of aviation in the world has advanced at a rapid rate, and now foreshadows the early production of heavy aircraft, with ranges of several thousand miles and with large, useful loads. For military aircraft, armament, ammunition, high explosives and authorized chemicals constitute this load. Range will be convertible into armament and vice versa. With sufficient bases, weather, oceans, and other natural obstacles form no effective barriers to the operation of these long-range aircraft. Their destructive potentiality is tremendous. A few such planes could carry in one load all the weight of explosives that were dropped on London during the World War.

Is it any wonder that the nations of Europe, with their nationalistic rivalries and political conflicts, live in constant fear of air raids, and seek protection by building up their aviation arms and by forming air alliances? These nations, as well as our own, realize that the only adequate answer to air attacks is the airplane.

It is the long-range airplane with a radius extending several thousand miles in any direction that, I believe, will form the future basic element of our air force and that will give to the United States its most flexible defense against any challenge from over the oceans.

The airplane has greatly increased the destructive power of military arms to the extent that a physical conflict between great nations might well prove to be so devastating that its prolonged prosecution would be a major catastrophe and, therefore, it is aviation perhaps more than any other power, which I believe will tend to discourage another World War.

I think that the continued development of a vehicle of mechanical transportation and military power of such possibil-

ities as the airplane, will, in all probability, prove revolutionary in its influence on political alliances and combinations throughout the world, and on international trade policies and treaties.

I am convinced, therefore, that the development of this new instrument of peace will continue to have an increasing influence upon our National security

---oOo---

ANOTHER ERRAND OF MERCY IN PANAMA

Suffering a serious throat ailment, Rosendo Jurado, Panamanian lawmaker and political leader in the province of Bocas, was rushed from Bocas del Toro to Panama City in an Army amphibian on April 22nd last. He was taken to the Santo Tomas Hospital shortly after 4:00 o'clock and was scheduled to undergo an operation immediately. On the morning of April 22nd, Enrique A. Jimenez, Secretary of the Department of Finance, received a telegram from Governor Selles of Bocas, as follows:

"Jurado gravely ill. Try to send hydroplane to rush him to Panama. President also advised today. Advise us of departure of plane and notify Dr. Brin."

An Army Amphibian, piloted by Major Willis R. Taylor, of France Field, who was accompanied by Captain Warren M. Scott and Lieut. Cecil Henry, left for Bocas del Toro in the morning and at 4:00 p.m. landed at Albrook Field, bearing the sick man. Mr. Jurado was transferred to an ambulance and rushed to the Santo Tomas Hospital. Dr. Brin examined

and commerce, and consequently upon the security and welfare of every individual.

The program of 2320 airplanes recommended by the Baker Committee and by the War Department is certainly a reasonable objective for the Army Air Corps, and is an insurance policy against warfare upon which I believe our people would be glad to pay the premiums."

Legation of the
United States of America
Panama, April 23, 1935.

My dear General Fiske:

The Minister for Foreign Affairs today expressed deep appreciation for the use of the Army airplane yesterday in bringing Senor Rosendo Jurado to Panama from Bocas del Toro. Doctor Arosemena asked me to transmit his most appreciative thanks, and those of his Government, to you and to the officers of your command who were instrumental in this errand of mercy.

I am, my dear General Fiske,
Very sincerely yours,
(Sgd.) George T. Summerlin.

---oOo---

WIDESPREAD AIR BOMBARDMENT CONTEMPLATED BY EUROPEAN POWERS

The Editor of the "Manchester Guardian Weekly" (England) writes in the April 12th issue an editorial "Wings Over Europe." An extract from this editorial, referring to European wars, is as follows:

"What part is the aeroplane likely to play in them? There are two views. One, to which General von Seeckt has given his support, is that the primary objective of each air force would be to destroy that of the enemy. The other, of which an early protagonist was the late Italian General Douhet, is that air power should be employed directly against vital centers on enemy soil. The latter view is that held by almost every general staff in Europe, including our own. Mr. Laurent Eynac, the former French Air Minister, said in the Chamber last week that the war functions of the French Air Force would be both to 'disorganize the mobilization and concentration of enemy troops' and to 'demoralize the civilian population.' What European Air Minis-

try would deny that its object is the same?

Thanks to the aeroplane, the mobilization of enormous masses of fighting men will not be easy. Air power will strike at the very outset of a future campaign. Mobilization centers, ammunition depots, railway junctions, power stations, road, rail, and river bridges far behind the lines will be subjected to a continuous bombardment. Everything will be done to cut lines of supply and communication and keep them out. Anti-aircraft defense will doubtless be organized. But since in a war of 'areas' and not of 'fronts' the advantage is throughout with the attacking air force no large success by the defense can be expected.

---oOo---

At Hamilton Field, Calif., there are over 40 vacancies in the grade of PRIVATE mainly in the 69th Service Squadron and Station Complement. Preference for these enlistments will be given those with clerical background, although a few fine mechanics can always be utilized.

THE SIGNIFICANCE OF THE GENERAL HEADQUARTERS AIR FORCE

In an article under the above subject in the May issue of U.S. AIR SERVICES, Lieut.-Colonel John D. Reardon, Air Corps, Chief of the Information Division, Office of the Chief of the Air Corps, after pointing out that the Army prior to March 1, 1935, had no unified command to operate all its combat units in the continental United States, stated that it has been clearly seen right along that the earliest mission of a nation's air defense will be called upon to perform is that of meeting and combating an enemy's air attack. Air power has greatly lessened the time required by an aggressive nation to launch an effective attack. In the event the nation on the defensive has no well organized air power of its own, air attacks can be readily directed against its power plants, water supplies, bridges, tank farms and similar nerve centers of industrial and economic life.

Unless our country's air units for the conduct of a defense against such an air attack are under a unified command which trains them for their duties in war and prepares the plans whereby they will carry out such duties, little hope can be entertained for a successful resistance against these early air attacks. Therefore, the War Department effected the organization on March 1, 1935, of the GHQ Air Force, with headquarters at Langley Field, Va.

A great amount of detailed analytical study lies behind the action taken by the War Department in thus organizing the GHQ Air Force. It has long been evident that to be of maximum effect on the conduct of a war, air operations must be properly coordinated with the general strategy of the war; and that a unified air effort offers the greatest hope of securing important results. The Air Force mission therefore may be stated: "to conduct such air operations as will afford the greatest aid in winning the war." This implies that there must be prepared as a guide for these air operations an Air Force operating plan so designed as to correlate and coordinate the Air Force operations with the operations of other forces to secure objectives which will be decisive in winning a favorable decision in the war.

To secure an objective of this nature requires the employment of all the aviation necessary to accomplish the purpose under a single direction and in a coordinated operation. It requires for the air units participating, training in peace in acting together and in the doctrines and methods of their especial task.

On the other hand an air force of this character, trained and operated as indicated, is entirely suitable and adapted to perform missions designed to afford direct aid to ground troops, such as the

operation of November 1, 1918, in the Meuse-Argonne battle, described by General Drum, as follows:-

"In our attack in the Meuse-Argonne on November 1, 1918, the First Army decided to use all its air forces to help directly the ground battle. * * * Some 8 kilometers beyond the jump-off line there was German artillery in a large woods. This was bombarded by our aviation from the beginning of the attack in order to counteract or neutralize the enemy's artillery fire. The result of that attack is well known. The Second Division by noon of November 1 had gone clear through the center of the enemy, and after that time the enemy was in full retreat."

The use of all the aviation as a combined force against a single objective of sufficient importance to secure decisive results is a good example of one of the things sought to be accomplished by those responsible for the organization of the GHQ Air Force as it exists today. To secure the most effective results aviation of the four classes must be trained to operate in combination as a team, and the leaders of the larger units must be given experience in peace in discharging their duties.

One of the most important questions which the operation of the GHQ Air Force is expected to answer is: "What is the correct unit organization for squadrons and groups and for the troops which handle supporting ground services in the various permanent stations of these Air Force units?" The War Department directive to Brig. Gen. Frank M. Andrews, Air Corps, commanding the GHQ Air Force, stated that the New Tables of Organization for Air Corps Units, were to be tested by the Air Force for a period of one year, at the end of which a full report thereon was to be submitted.

The Commanding General, GHQ Air Force, has been given authority to make changes in these tables as deemed necessary, provided the total numbers of grades and ratings are not exceeded. He also has been directed to submit a preliminary report on these Tables of Organization on or before October 1, 1935. These tables provide for a greatly reduced personnel in the tactical squadrons and for larger "mobile service squadrons" designed to support in the field away from permanent Air Corps stations, the operations of the tactical units. All the personnel performing duties pertaining to the administration and operation of each permanent post are included in a single organization designated as the "station complement."

Another early problem to be solved by the GHQ Air Force is the determination of the needs in troops of other arms, air-dromes, communications and supply for the support of intensive operations of the

Air Force in the field in case the country is attacked. A great amount of data upon this subject has been secured during Air Corps maneuvers held in the past. The Air Force staff now affords a continuing agency for the practical application of suggested methods in actual operations, and details may be expected to be worked out with a sureness which a theoretical treatment alone could not hope to approach.

After touching upon the experience expected to be afforded as a result of the policy recently inaugurated by the War Department of bestowing temporary increased rank to Air Corps officers commensurate with the duties they are performing, Lieut.-Col. Reardan went on to say that the creation of the GHQ Air Force fits in with the "Four Army Organization" evolved by General Douglas MacArthur and that when Air Force operating plans are completed they will provide for the employment of the GHQ Air Force, either in whole or in part, in any one of the four Army areas. The great mobility of the Air Force units will enable a prompt concentration of the whole Air Force at any location directed by the War Department or provided for in operating plans. The organization of the GHQ Air Force Headquarters provides a commander and staff constantly trained in the handling of such a combined air force and charged with a continuing study of new means and methods designed to make its operations more effective.

---oOo---

GENERAL PRATT VISITS SELFRIDGE FIELD

The 27th Pursuit Squadron was recently accorded the signal honor of escorting General Henry C. Pratt, Commander of the Second Wing, to Selfridge Field, upon his inspection tour of Air Corps fields within that Wing. Early in the afternoon, all available P-26 airplanes were turned over to the 27th Squadron, and this winged armada of 15 airplanes took the air under the command of Major James E. Parker.

Breaking up into search formation, the Squadron patrolled the area eastward toward Buffalo. Finally, an O-38 appeared on the horizon. Quickly assembling the unit by radio, Major Barker ordered the unit to fly escort until Selfridge Field was reached. Upon arriving over the field, the unit dived on the field, announcing the arrival of the distinguished guest. General Pratt was particularly impressed by the ease with which the Squadron spotted his O-38 and made the statement that Observation planes in the next war would have to be extremely alert to avoid becoming "Cold Turkey" for enemy Pursuit.

---oOo---

CRITICISM OF MULTIPLACE COMBAT PLANE

Pierre Faure, one of the regular air writers on the staff of PARIS SOIR, in a recent article criticizes the use of multiplace combat planes on which the French air doctrine is based at the present time. He says:

"The French General Staff has ordered its air materiel with an idea in mind which can be summarized as follows: let us build planes of sufficient useful load and of sufficient speed to be fit for various missions: day and night bombardment, protection, long range reconnaissance, etc.

This type of plane - the multiplace combat plane - has been studied and built by a certain number of manufacturers and we saw at the last Air Show, Breguet, Potez and Bloch types constructed under that program.

What are we to think of the "all purpose" plane? Is it interesting?

The programs which led to these combat planes, by reason of the various missions of these planes, have called for a complete armament, a large personnel, and numerous accessories. The manufacturers have built planes with complex installations, which are heavy and finally not sufficiently fit for certain of the most important missions which they were, originally, to discharge.

If a plane carries three scarf mounts, it requires 3 men to serve them, and if this plane is to be able to attack and to defend itself, this leads to a formula with a very small margin for the useful load. So that it was learned by experience that these multiplace combat planes are insufficient for long range night bombardment.

The result is that the most important mission of a "retaliation" plane - night bombardment - cannot be satisfactorily performed by the multiplace combat plane, in which a lot of confidence was placed.

Combat is one thing, and bombardment another.

A plane specialized in night bombing does not need an important defensive armament. Personally, I believe that retaliation planes would gain by not being armed at all. It is impossible to do anything. A plane which has to travel far must carry as heavy a bomb load as possible and must neglect its defensive means, otherwise its useful load diminishes rapidly.

In case of an attack by enemy planes, the crew will have to use parachutes if the situation warrants it. But this would rarely happen, judging from what we know of night bombardment, as in most cases retaliation planes will reach their objectives without having to use their defensive armament. It would seem wise, in my opinion, to build heavy carriers like the Farman 221 and the Bernard retaliation plane, moderately armed but

V-6787, A.C.

capable of fulfilling their mission under good conditions.

To adopt "all purpose" planes is to risk never having the only planes which are really useful at the present time:

---00---

JUNIOR BIRDMEN VISIT SELFRIDGE FIELD

Seventeen members of the Junior Birdmen of America visited Selfridge Field, Mich., on April 25th, as guests of Lt.-Col. Ralph Royce, Post and Group Commander. These air-minded young men, ranging in age from 16 to 21 years, had come to Detroit from widely scattered cities of the United States to compete in the National Finals of the Junior Birdmen's Model plane-building contest. All were district champions in the art of constructing miniature gliders, ROG and tractor flying models.

While the birdmen were visiting the field, the 27th Pursuit Squadron staged an air show for their benefit. Starting the afternoon's entertainment, Capt. Karl G.E. Gimmmler and Lieut. Joe Irvine staged a combat directly over the field. An acrobatic team composed of Major

retaliation planes. For France has none of these and there is nothing which permits us to believe that she will have any in the near future. That is where the difficulty lies.

James E. Parker, Capt. Walter E. Todd and Lieut. Paul W. Blanchard followed the combat and thrilled the visitors with their perfectly-timed execution of difficult acrobatic maneuvers. Major Parker tossed an extra thrill into the crowd when he half-rolled his P-26 over the edge of the field at 2,500 feet and, leveling out the plane,, flew on his side the length of the field past the reviewing stand, with his wings perpendicular to the ground. All effect seemed lost, however, on one young birdman from Georgia who mildly exclaimed: "What's the matter, have the cross-winds got him?" The show was climaxed by an aerial review of 15 P-26A's demonstrating close "V," elements and flights in line, echelonment up and down, and rat-racing.

---600---

WASHINGTON NATIONAL GUARDSMEN PARTICIPATE IN WAR GAME

By the News Letter Correspondent

A Red enemy force attacking Spokane, Wash., hub of the Inland Empire, was defeated in a war game on the morning of April 28th, when 400 officers and men participated in a command post exercise for "the purpose of giving practice in staff and communication technique."

For more than four hours, four Observation planes of the 116th Observation Squadron, 41st Division Aviation, Felts Field, Spokane, flew over the problem, executing communication, panel and photographic missions.

At Brigade Headquarters, American Lake, Wash., Brigadier-General Carlos Pennington commanded the exercise, which included the communication platoons of the Fourth Infantry Regiment, Fort George Wright; 161st National Guard Infantry, 1st battalion; the 1st battalion of the 148th National Guard Field Artillery, and personnel of the 116th Observation Squadron.

For delegates attending the Annual Convention of the Washington Department of the Reserve Officers' Association, the problem was a closing Convention feature, giving seven hours' credit to all Reserve officers participating in the problem. Lieut.-Colonel Abbott Boone, of Seattle, in charge of Reserve activities for the State of Washington, observed the exercise with outspoken approval and commendation.

Two Douglas O-38E planes from the 41st Division Aviation, equipped with SC-134 radio sets, were in constant contact with the 81st Brigade Headquarters and

the 148th Field Artillery. Observations of front lines were made every 30 minutes and reported by radio, to be verified later by overlays.

A third O-38 made 30-minute observations of the front lines of the 161st National Guard Infantry and 384th Infantry Reserve. These positions were reported by overlays after front line panels had been displayed upon request by the firing of a red Very pistol.

The fourth plane, photographic, delayed at Felts Field, which was the advance airdrome, about nine miles from the theatre of operations. Communication with this plane was through the Brigade Headquarters radio to the ground station at Felts Field.

Three photographic missions of front line locations were called for in code radio communication. Actual delivery of the photographs to the front line locations was made in 17 minutes, not including the time for coding and decoding the messages.

Observers participating in the exercise learned considerable about "closer observation of smaller objectives on the ground" as considerable difficulty was experienced at first in locating the 24-inch square white and orange panels on the wooden ground, indicating the front line positions of the friendly troops. The observations were made at about 4,500 feet above sea level, or 2,500 feet above the ground. The problem was spread over an area of less than three miles about the banks of the Spokane River, below Fort

George Wright.

Exceptional practice resulted from the problem for all radio stations, which included a net of five stations composed of two radio ships, the Felts Field ground station, Brigade Headquarters and 148th Field Artillery Headquarters. Special wave lengths were assigned all stations, and all messages were sent in code for decoding purposes.

All watches, including those of pilots and observers, were synchronized by radio from Brigade Headquarters, which twice moved its position during the problem.

Major Edwin D. Patrick, Infantry, Regular Army Instructor attached to the 161st National Guard Infantry, and author of the exercise, acted as chief umpire, and had as assistants Regular Army officers from Fort George Wright.

The only organization permitted the use of pyrotechnics was the 41st Division Aviation, which was assigned red Very pistol for display of front line marking panels, green Very pistol for "acknowledge," and white Very pistol for "Ready to work with you."

A special encode and decode was prepared by Major Patrick. Symbols were created to designate all hills, bridges, rivers and creeks, houses, road junctions and Civilian Conservation Camps in the area.

At the critique which followed the program, General Pennington declared that much good resulted from the exercise, adding that "the officers from all organizations functioned well after getting the problem in mind, and we proved that our officers and men are ready to meet any situation that might arise."

Throughout the problem the 41st Division Aviation kept a close liaison with the ground forces and explained the situations in which the aircraft could best serve the friendly troops.

Similar exercises are on the training schedule for the 41st Division Aviation Camp on June 11th at American Lake, Wash., where a Division Camp will be held for two weeks.

---oOo---

RADIO BEAM FLYING BY 11th BOMB. SQUADRON

The 11th Bombardment Squadron, Hamilton Field, Calif., is entering into an extensive operations program as outlined in War Department Circular No. 6, January 24, 1935. On April 18th, four Squadron officers completed a 300-mile radio beam flight to Humboldt, Nevada, and four other officers completed a 600-mile radio beam flight to Yuma, Arizona. The training program is being met with the greatest enthusiasm by all personnel, and they voice the hope that more airplanes will soon be made available in order to conduct the training yet more intensively.

FIELD EXERCISE BY 56th SERVICE SQUADRON

The 56th Service Squadron will depart on May 17th from Selfridge Field, Mich., for a short field exercise for the purpose of limbering up trucks which have been in "cold storage" at that field since their arrival. The contemplated exercise, which it is believed is the first of its type to be undertaken since the organization of the GHQ Air Force, is expected to furnish much valuable information regarding the movement of an entire organization under the new plan.

These exercises will take place in the vicinity of Flint, Mich., and will include every officer and man of the Squadron present for duty on the station. The equipment will consist of 12 Dodge personnel carriers, one Ford field ambulance, FWD 400-gallon gas truck for servicing trucks and airplanes, one Dodge $\frac{3}{4}$ -ton panel truck, 5 Dodge $\frac{3}{4}$ -ton pick-ups, 20 Dodge $1\frac{1}{2}$ -ton trucks, 7 Federal $2\frac{1}{2}$ -ton cargo trucks; and a few motorcycles, the number dependent upon those set up at the station at the time the Squadron takes the field.

The Squadron will move out on May 17th and proceed via a roundabout route to the site selected, which will be in close proximity to some airport, and set up camp. On the 18th, all available airplanes of the First Pursuit Group will work in and out of the airport selected, during the course of a tactical problem. The 56th Squadron will service these airplanes and make such repairs as may be necessary. On May 19th, the Squadron will strike camp and proceed to Selfridge Field.

Major Warren A. Maxwell will command the Squadron; Captain Morley F. Slaght will be in charge of supply functions, and 1st Lieut. William J. Bell will be in charge of the convoy, with Master Sgt. Bredvad and Technical Sgt. Forster in command of sections of the convoy.

---cOo---

HELIUM GAS FOR CAPTIVE BALLOONS

A matter of interest with reference to the development of Lighter-than-Air equipment is the recent action taken to furnish the First Balloon Squadron at Fort Sill, Oklahoma, with Helium for the operation of a captive balloon by that organization.

The Air Corps Materiel Division, Wright Field, is collecting comparative performance data that would be of value in the design of an observation balloon intended for operation with Helium gas. This marks a decided advancement, as heretofore captive balloons have been operated with hydrogen gas only, with the consequent fire hazard, which is eliminated when Helium is used.

NEW HAWAIIAN DEPT. COMMANDER HONORED

The 18th Pursuit Group, Wheeler Field, T.H., held an inspection, review and tactical exercise in honor of Major General Drum, the new Hawaiian Department Commander, on April 4th. The flying equipment, personnel and motor transport of the group was inspected on the line, after which airplanes and motor transport passed in review. This was followed without interval by an attack on the Group motor column by the aircraft of the Group. The General expressed himself as well pleased with the showing of the Group, despite rain, low clouds and generally unfavorable conditions.

In the evening, the Group with other elements of the 18th Wing gave a reception and dinner in honor of the new Department Commander at the Oahu Country Club.

---oOo---

FIRST WING HAS SECOND CONCENTRATION

Fifteen sky raiders of Hamilton Field, Calif., passed in air review on April 13th, as a preliminary to the second concentration of the 1st Wing the next day. At 7:30 a.m., on April 14th, 14 Bombers, under the command of Lieut.-Colonel Clarence L. Tinker, took off from Hamilton Field to a 10:30 a.m. rendezvous over Cajon Pass. At 11:00 a.m., they bore down on March Field to join the second concentration of the 1st Wing. In the afternoon they passed in review before Brigadier-General Henry H. Arnold, Wing Commander.

On April 15th, the Ninth Corps Area Commander, Major-General Paul B. Malone, reviewed the Wing, of which the 7th Bombardment Group flew as a unit. At noon of the following day, the 14 planes of the Group landed at Hamilton Field, marking the end of the Maneuvers.

---oOo---

ARMY DAY AT AIR CORPS FIELDS

On Army Day, April 6th, an aerial review was held at Barksdale Field, La., and the entire Third Wing flew over the City of Shreveport immediately thereafter. Very generous publicity was given the occasion by the local newspapers, and the Shreveport TIMES arranged an interesting and unique radio broadcast of the review, with a preliminary address by Lieut.-Colonel Millard F. Harmon, commanding the Third Wing during the absence of Colonel Gerald C. Brant, who was attending a conference of Wing Commanders at Langley Field, Va.

The 18th Pursuit Group participated in a Wing Review over the City of Honolulu on April 5th, as part of the Hawaiian Army Day Program. This was followed by

a Pursuit demonstration featuring a large letter "A" by the 6th Squadron and Pursuit acrobatics by the 19th Squadron. An airplane from the Group was displayed in Honolulu as a part of the Army Day Program

On April 5th, the 5th Composite Group, stationed at Luke Field, engaged in a Wing aerial demonstration over the Island of Oahu and City of Honolulu in commemoration of Army Day. On April 6th, Luke Field and the 5th Composite Group joined with all other military forces of the Hawaiian Islands in placing extensive military exhibits on the Capitol grounds for the benefit of the general public. The Air Corps exhibit consisted mainly of airplane motors, miscellaneous airplane parts, armament and parachutes, and attracted a wide attendance and very favorable comment.

---oOo---

FORMATION LEADERS FLYING UNDER THE HOOD A ROUTINE OCCUPATION AT HAMILTON FIELD

Inviting attention to the item in the April 1st issue of the News Letter to the effect that the 50th Observation Squadron at Luke Field, Hawaii, has been experimenting with formations in which the leader flies under the hood, the Hamilton Field Correspondent states that occasions have developed at that field when the formation leaders were forced to fly by instruments alone through "soupy" weather as a matter of absolute necessity and not one of experiment or practice. "Accordingly," he adds, "it is urged by the pilots of Hamilton Field that their friends in the 50th continue zealously their experimentation."

---oOo---

AERIAL GUNNERY BY 7th OBSERVATION SQUADRON

The 7th Observation Squadron, stationed at France Field, Canal Zone, completed its annual Gunnery Encampment which was established at Rio Hato, Republic of Panama, on April 8th. Following the completion of the course, the camp was turned over to the 25th Bombardment Squadron on April 18th, making ten days altogether in the field. A permanent crew of two officers and 17 enlisted men was maintained for the purpose of camp administration. Three officers commuted daily from France Field to Rio Hato at noon, firing in the late afternoon and early morning. In general, the firing was good, considering the poor air conditions on some mornings. All officers who fired qualified, five as Expert in the Pilots' Course and ten as Expert in the Observers' Course. Capt. C.W. Cousland made high score on the former and Major Wm.B. Mayer on the latter. Fifteen enlisted men qualified on ground targets.

V-6787, A.C.

COOPERATION IN METEOROLOGICAL SERVICE

In a paper recently presented during the aeronautical session of the 6th Annual Greater New York Safety Conference by Mr. Willis R. Gregg, Chief of the Weather Bureau, U.S. Department of Agriculture, he stressed the great importance of cooperative effort on the part of all agencies concerned in the organization and use of weather service to promote safety in aeronautics.

Stating that the Weather Bureau is charged by law with the responsibility of providing meteorological service for all public needs, Mr. Gregg added that, so far as weather service for aeronautics is concerned, the three governmental bureaus with which cooperation is most vitally necessary are the War, Navy and Commerce Departments.

Prior to the World War, the War and Navy Departments had no meteorological units of their own, all weather service being centered in one agency, the Weather Bureau. The experience in that war led to a change of policy relative to weather service, its great importance in military and naval campaigns leading to the creation of relatively small meteorological sections in both departments as a regular part of their peacetime organization. The service is of a highly specialized type, differing in many respects from that for any form of civil activity. The personnel engaged in it also have military training and status, with the result that these units will be able to function at once in case of war.

With the establishment of these additional meteorological organizations within the government, steps were taken to eliminate all unnecessary duplication and to make their facilities and service and those of the Weather Bureau mutually available and effective. Very complete observations, including upper air, are made at the air stations of these Departments and on aircraft carriers, and the data made available to the Weather Bureau for both current and statistical use.

The meteorological services of the War and Navy Departments depend upon the Weather Bureau for the greater part of the data they require. At Washington representatives of the two Departments copy and chart the reports at the Bureau itself. In other cases they are received by radio and in still others by means of a teletype drop connected with the airway communication system of the Department of Commerce, with the result that the data from all sources are available for the use of each service at essentially the same time.

A very important cooperation is extended to the Bureau by the communication services of the two Departments. For example, the Alaskan reports are trans-

mitted by Signal Corps radio to Seattle, Wash., whence they are distributed to other points in the States. Similarly, the Navy Department forwards reports from its own ships and in many cases collects and transmits similar reports from merchant ships, particularly during periods of severe weather conditions such as occur in the hurricane season.

The most recent example of cooperation and one of the most valuable is the organization in July, 1934, of a network of airplane observational stations, comprising 22 as against half a dozen prior to that time. About an equal number is maintained by each of the three agencies. Those of the War and Navy Departments are at their flying fields and the flights are made as a regular part of the program of training, with the result that very little additional expense is involved. The records secured are already proving to be of great benefit, although the period of their use is as yet too short to make possible a full appraisal of their value. All three services are employing the so-called "air-mass analysis" technique in the charting and study of these upper air records of temperature and humidity and from some results already obtained it is quite evident that considerable improvement in the accuracy of weather forecasting will be realized.

The Bureau of Air Commerce, Department of Commerce, responsible for the safety and efficiency of civil air transport, has direct charge of the organization and operation of certain navigational and other aids, the most important of which, so far as meteorological service is concerned, is communications which, gradually developed into its present high state of efficiency, is the medium through which weather reports and forecasts are provided promptly to pilots and others needing them. The chief difficulty, so far as weather service is concerned, is that of arranging suitable time schedules. There seems always to be more information available than there is time for its transmission. However, the problem is under constant attack by the two Bureaus, one working on the development of improved equipment and technique and the other on the possibilities of condensing of observational material, by code or otherwise, to assure the regular transmission of all that is needed by the broadcasting stations throughout the airway system. The cooperative work by the two Bureaus constitutes a very definite factor in assuring as large a margin of safety from the hazard of weather as is possible at the present time.

A type of cooperation which is gradually growing and is certain to develop into a most important feature of the whole weather service is that given by air transport companies. After an airway has been provided by the Weather Bureau with all necessary current information and forecasts, there still remains the necessity of holding or releasing each plane as its scheduled time of departure arrives. In assuming this responsibility, air transport companies have come to recognize that the dispatchers must include, as an important qualification, a very intimate acquaintance with the details of the weather service, if not a fairly comprehensive knowledge of the science of meteorology itself. Some of the larger companies have personnel with sufficient meteorological training to make them competent to apply the service furnished by the Weather Bureau to their own needs.

Weather Bureau forecasts usually cover successive periods of four to six hours, but the meteorological personnel of some of the companies supplement these by more detailed forecasts for each individual flight.

Within the past year an arrangement has been worked out with one of the air transport companies in accordance with which its pilots make notes of the weather conditions through which they pass, - temperature, height of base and top of cloud layers, occurrence of ice formations, bumpiness, rain, snow, marked inversion, change in wind direction and velocity and anything else of special interest. These data are given to the Weather Bureau's airway forecast centers as soon as the plane lands. Plans are under consideration for the receipt of the reports by radio during the flights. It is altogether probable that other companies will enter into a similar arrangement. Already important results are being realized.

The primary obligation in making a flight is to get the plane and cargo through safely, but comparatively few flights would ever be made in some sections if they were limited to really satisfactory weather conditions. Unless schedules can be kept with reasonable regularity, confidence breaks down and patronage ceases. It becomes necessary, therefore, to "strike a balance", to attempt all flights except those when it is considered that the conditions are so bad as to offer a real hazard. Decision is often difficult, particularly in what may be called "borderline" cases, when conditions are passable and are expected to continue passable for the duration of the flight, yet there is a possibility of their changing for the worse sufficiently to make flying difficult or even dangerous. The problem is being rendered progressively easier by the introduction and use of navigational and other aids, such as radio beacons, ranges,

markers and broadcasts, course lights and improved equipment and by the experience of the pilots themselves, with the result that flying is now perfectly safe in many conditions that formerly would have been considered decidedly adverse.

There are two essentials in solving this problem of safety completely. One is that information concerning the weather, both current and expected, be detailed, accurate and complete. The other is that the pilot, or other official having the responsibility of ordering or canceling a flight, give due regard to the information and forecast furnished by the meteorologist.

In a study of aircraft accidents caused wholly or in part by bad weather, it was found that the meteorological factors most frequently responsible for the occurrence of accidents are as follows, in the order of their importance:

1. Ice formation.
2. Low ceiling.
3. Poor visibility, caused by fog, rain, snow, smoke, dust, haze, sand and dust storms.
4. Heavy precipitation.
5. Bad field conditions resulting from snow, ice, rain, etc.
6. Thunderstorms, squalls, etc., with attendant strong vertical currents and turbulence.
7. Gustiness and turbulence near the ground.
8. Unfavorable winds, causing exhaustion of fuel supply.
9. Lightning.

During the years 1931 to 1934, inclusive, the period covered by the above study, there were 102 accidents in scheduled air transport operations that were definitely charged to weather. In 88 of these, or 36%, the conditions as actually encountered were known by the pilot before starting on his flight. In the remaining 14 cases, 14%, the conditions actually encountered were more unfavorable than expected, some of them being due to bad weather locally between observing stations of whose existence, therefore, there was no way of knowing.

In the light of what happened, especially in the 88 cases when it was known in advance that conditions were bad, it is of course apparent that the flights should not have been undertaken. Yet in many of these cases the conditions were no worse than on other occasions when flights had been made without accident. This emphasizes the difficulty of making a decision in these "borderline" cases, and it emphasizes also the great need of the closest kind of cooperation between pilot and meteorologist. That this cooperation is becoming increasingly well established is shown by statistics furnished by the Bureau of Air Commerce. In the year 1931, the number of accidents caused by weather was 30, as against 35 for 1932, 25 for 1933 and 12 for 1934.

The approximate number of miles flown

in the year 1931 was 47,000,000; in 1932, 52,000,000; in 1933, 54,500,000, and in 1934, 41,000,000.

In 1931, approximately 1,600,000 miles were flown per accident due to weather, as against 1,500,000 for 1932; 2,400,000 for 1933 and 3,400,000 for 1934.

From these figures we see that there has been during the past four years an increase in safety, from accidents caused by weather, of more than 100 percent in scheduled air transport operations, considered on the basis of the number of miles flown. A part of this increase is, of course, a result of improvement in other airway aids, but it is believed that by far the larger part can be attributed to the more intensive use of the airway weather service. Also, the weather service itself has been improved in many ways, chiefly through the experience gained by personnel engaged in it, the establishment of additional upper air stations and the adoption of improved, modern methods of forecasting.

In conclusion, we are quite justified in stating that, with improved design and construction of aircraft, the perfection of navigational aids, the development of an increasingly efficient weather service, and above all complete and effective cooperation on the part of all agencies involved, we may look forward with confidence to a progressively continuing decrease in the number of accidents caused by adverse weather conditions.

---oOo---

LANGLEY FIELD WEATHER BROADCAST SERVICE

A system is in the process of installation at Langley Field, Va., whereby weather broadcasts similar to that of Department of Commerce Stations will be made by the Post Operations Office at Langley Field. This service will be operated on the frequency of the Langley Field radio beacon at zero minutes past the hour, during poor daylight weather, when night flights are cleared to or from Langley Field, and upon request.

The Post Operations Radio Station will guard 3105 Kcs. (and other frequencies upon request) for requests for weather information. This service will be in operation 24 hours per day.

The following sequence will be observed in the weather broadcasts:

- 1, Station; 2, Ceiling; 3, Condition of Sky; 4, Visibility; 5, Temperature; 6, Dew Point; 7, Direction and speed of wind; 8, Barometer; 9, Any special hazards or conditions of interest to the pilot.

When a key in the Post Operations Office is depressed, a relay to the Radio Beacon is actuated, opening the plate circuit of the transmitter tubes and temporarily silencing the Beacon. Another relay actuates the switch on a

remotely controlled SCR-132 set tuned to Beacon frequency. The operations operator on duty at his desk in Post Operations Office broadcasts his weather sequence and /or requested information. Upon releasing the key, the remotely controlled radio set cuts off and the Beacon resumes its broadcast.

The operations personnel are being trained in broadcast procedure and voice so that the pilot flying blind can hear "Ceiling Zero, Visibility Zero," spoken by a pleasant, modulated "voice with a smile."

---oOo---

AERIAL SURVEY TO DETERMINE THE EXACT BOUNDARY LINE OF THREE COUNTRIES

The 12th Photo Section, Air Corps, stationed at France Field, Panama Canal Zone, completed 6,000 multiple lens prints from 1200 T3-A camera negatives made by Major W.R. Taylor and Sgt. George W. Edwards on the border line of Guatemala, Honduras and El Salvador. These photographs were made at the request of the State Department for the Arbitration Commission of the three countries who are settling the exact boundary line.

---oOo---

88th OBS. SQDN. RETURNS FROM WEST COAST

The 88th Observation Squadron (LR Amphibian) returned April 17th from March Field, Riverside, Calif., where four days were spent participating in maneuvers of the 1st Wing (to which this squadron is attached). The flights out and return were made as Squadron air navigation missions under the leadership of Major Calvin E. Giffin, Squadron Commander.

The seven planes making the trip, in two flights of four and three planes, respectively, took off from Brooks Field at 5:30 a.m., April 13th, and arrived at March Field, flying by way of El Paso, Texas, and Tucson, Arizona, about 4:30 p.m., Pacific Coast time the same day.

The following day was passed in critique, flying practice review, and the Wing Dinner, at which affair all pilots of the 1st Wing were addressed by Major-General Paul B. Malone, 9th Corps Area Commander, and by Brigadier-General Henry H. Arnold, Commander of the 1st Wing.

On April 15th, the entire Wing participated in Mass Maneuvers and in a review honoring General Malone. Some 150 planes, comprising one Bombardment Group, Hamilton Field; one Attack Group, March Field; one Observation Squadron, Rockwell Field; one Squadron from Crissy Field, and the 88th Squadron from Brooks Field took part in these maneuvers.

BARKSDALE FIELD BECOMES ONE OF LEADING CROSS-ROADS IN SERVICE AVIATION

Barksdale Field, Shreveport, La., long the proposed and now the actual home of the Third Wing, GHQ Air Force, is rapidly becoming one of the leading cross-roads in service aviation. The Navy, Coast Guard and Marine branches, as well as our own Air Corps, make frequent use of Barksdale Field's facilities in East-West crossings of the continent. The southern route for this crossing is becoming of increasing importance and, in many instances, shortens distances.

As evidence of the convenience and importance of this field, the following data as to distinguished visitors during April is submitted by the News Letter Correspondent:

Major-General George S. Simonds, Deputy Chief of Staff of the Army, accompanied by his Aide, 1st Lieut. C.K. Gailey, made an informal inspection of the new Third Wing at this field on April 3rd. The two officers were flying in an Army Transport plane, piloted by Capt. Hez McClellan. The extended inspection trip taken by General Simonds, utilizing air transportation, is evidence of increasing air-mindedness on the part of General Staff officers. General Simonds inspected many Army fields, as well as other Army posts and installations during the trip.

General Foulois, accompanied by Captain H.A. Halverson, made an informal inspection of the field on April 4th. On April 24th, General Foulois, this time accompanied by Major Carl Spatz, again stopped at Barksdale Field, remaining overnight.

Hon. Harry H. Woodring, Assistant Secretary of War, honored Barksdale Field with his first visit on April 17th. He expressed himself as well pleased with the field and the aerial review held in his honor.

Captain Albert C. Read, who flew the NC-4 across the Atlantic Ocean in 1919; Lieut.-Col. Roy Geiger, Chief of Marine Corps Aviation, and Major Francis P. Mulcahy, veteran Marine Corps flier, made a brief stop at this station, en route to California. Colonel Geiger was ferrying a new Vought Corsair Observation plane

to San Diego.

Mr. George S. Wheat, Vice President of the United Aircraft Corporation, arrived on April 4th, shortly after General Foulois departed. His pilot was Mr. B.E. Whelan, Manager of United Airports of Connecticut, Inc., and Mr. Philip Nevin was co-pilot. Mr. Wheat recently returned from a trip around the world, during which he visited many air fields of various sizes and prominence, and he expressed himself as being greatly impressed by this Army air base. Several officers of this station were taken for a demonstration ride in the latest type Boeing 2-47, equipped with two double-row Wasp engines of 700 horsepower and new constant speed, variable pitch propellers, prior to Mr. Wheat's departure on April 5th.

Capt. John H. Hoover, Chief of Staff to the Commandant of the Aircraft base force of the U.S. Fleet, accompanied by Lieut.-Commander Alfred Stump, made an overnight stop here on April 13th, en route to San Diego. On the same date, Commander Alfred Montgomery, from Pensacola, Fla., was also enroute to the West Coast, spent the night at Barksdale Field.

In addition to the largest landing field in the country, Barksdale Field comprises a large area of lakes, bayous and woods. This area is part of the reservation and provides machine gun and bombing ranges. The total area of the reservation is some 22,500 acres. Tentative plans of the Fourth Corps Area call for the assignment of two CCC companies for the care of the wooded areas. Each company will require 14 buildings for housing, administration and messing. Last summer, forest and brush fires threatened a large portion of the outlying areas, and at one time several thousand acres of woodland were burned. This area of woods and lakes provides an ideal fish and game sanctuary. A limited amount of fishing and hunting in season is now allowed, and by means of proper conservation methods, it is hoped to make this feature the cause for many visitors.

The present population of Barksdale Field, including families of officers and enlisted men, is about 2,500.

---oOo---

TIMELY WARNING BY ARMY PILOTS AVERTS CALAMITY

The 11th Bombardment Squadron, Hamilton Field, Calif., received credit for another errand of mercy on April 15th. A troop of sea scouts had put out from a San Francisco wharf in two boats, provisioned with food reported to be poisonous. Upon receiving word of the situation, Lieuts. Aubrey K. Dodson and O.M. Nelson immediately took off, located the two boats on San Francisco Bay with neatness and dispatch, and successfully dropped messages to the Scouts, saving them from possible death or serious illness.

---oOo---

LIBRARY ESTABLISHED AT HAMILTON FIELD

Chaplain Stanley J. Reilly transformed the old frame building, originally erected as an office of the Constructing Quartermaster, into a chapel of worship. Through his efforts, the people of the Bay districts have given of their books and magazines to the soldiers at Hamilton Field. With this as a nucleus, he has organized a post library with almost a thousand volumes. He is now the Post Library Officer as well as the Post Chaplain. Chaplain Reilly has also sponsored a movement for the initiating of a Hamilton Field Stamp Club among the children of the post.

RECIPIENTS OF THE DISTINGUISHED FLYING CROSS (Continued)

For heroism while participating in aerial flight.

Air Corps

Lieut. Russell L. Meredith

For hazardous flight, February 7, 1923, taking medical aid to injured man at point of death on Beaver Island, Lake Michigan, under extremely adverse and dangerous flying conditions.

2nd Lieut. Uzal G. Ent

During the National Elimination Balloon Race, starting from Bettis Field, Pittsburgh, Pa., May 30, 1928, the balloon was struck by lightning, instantly killing Lt. Paul Evert, pilot. Not certain that pilot was killed, Lt. Ent, aide, endeavored to revive him at the risk of his own life instead of jumping with his parachute.

Master Sgt. Ralph W. Bottriell

On May 19, 1919, at McCook Field, Dayton, O., he made the first jump to be performed by Army personnel with a manually operated free type parachute. Jumping of any kind was then considered extremely hazardous. Sgt. Bottriell repeatedly jeopardized his life while making parachute test jumps from airplanes flying at various speeds and altitudes to perfect this parachute. By his untiring efforts, fearlessness and disregard of personal danger, he aided materially in proving the practicability of the free type parachute for airplane use.

Captain Hawthorne C. Gray (posthumously)

On March 9, 1927, he attempted to establish a world's altitude record for the Air Corps, and reached 27,000 ft.; on May 4, 1927, he reached 42,470 ft. and on Nov. 4, 1927, 42,000 ft. After reaching the ceiling on his last attempt, the supply of oxygen became exhausted when the balloon reached about 37,000 ft. on the descent, and Capt. Gray lost his life.

Captain Ulysses G. Jones, pilot

1st Lt. Walter T. Meyer, Radio Operator,

2nd Lt. Edwin T. Rawlings, pilot

Staff Sgt. Robert F. Summers, mechanic

During a tactical training flight of 16 planes from Luke Field to Hilo, Hawaii, May 14, 1930, one of the bombers fell out of control and the crew were forced to take to their parachutes, landing in a rough sea. Capt. Jones and Lt. Rawlings, each piloting amphibian planes, landed on the water in an attempt to rescue these men. Owing to the high wind and waves, coupled with the non-functioning of motors of these planes, efforts made to maneuver them towards the men in the water proved unsuccessful. However, by landing in close proximity to them the crew of a Naval flying boat was able to see the men and effect their rescue.

2nd Lt. Irvin A. Woodring

2nd Lt. Wm. W. Caldwell, Res. (posthumously)

On October 15-16, 1930, Lieut. Woodring as flight leader, accompanied by Lt. Caldwell, both piloting Pursuit planes, proceeded from

Vancouver, Canada, under secret orders of the War Department, to Newark, N.J., carrying documents of international importance for delivery to a State Department agent at Newark, their receipt by the latter on scheduled time being of the utmost importance. Extremely hazardous flying conditions were encountered in Wyoming, snow and clouds completely destroying visibility from the ground to an altitude of 16,000 feet. Lieut. Woodring, carrying the original papers, delivered them in time.

Lieut. Caldwell, blinded by a snow storm, crashed to his death.

1st Lt. Robert D. Moor (posthumously)

On August 23, 1931, during a formation flight, a terrific air current encountered caused one of the planes to be thrown against the one piloted by Lt. Moor, damaging the tail group and rendering it uncontrollable. Instead of jumping with his parachute, Lt. Moor endeavored first to save his passenger and repeatedly ordered him to jump. The latter eventually jumped and landed safely with his parachute, but in leaving he unbalanced the airplane which immediately fell out of control, crashed and burst into flames, resulting in Lt. Moor's death.

Sergeant Frank D. Neff

On the night of Dec. 3-4, 1931, during a severe wind and rain storm, the Army airship TC-71 broke from its moorings. Sgt. Neff succeeded in starting one of the motors but was unable to start the other from within the car. Realizing that the airship was not under full control and in danger of being wrecked and the crew injured, he immediately discarded the parachute, climbed out of the car upon the unprotected outrigger of the wildly plunging dirigible, and working in the darkness in this perilous position succeeded in hand-cranking the left motor, thereby bringing the aircraft under full engine control.

1st Lt. Cornelius W. Cousland

While piloting an amphibian plane May 31, 1934, in the Panama Canal Zone, mechanical failure caused a portion of the right motor to penetrate the pilot's cockpit with such force that the co-pilot was fatally injured and fell across Lt. Cousland and the controls. The plane started into a spin. Disregarding his own serious injuries, Lt. Cousland ordered his passengers to retain their seats, and by his courage, presence of mind and complete mastery of the art of piloting, maneuvered the disabled aircraft to a safe landing on the surface of a stump-studded lake.

Awards for other outstanding accomplishments

Orville Wright

Wilbur Wright (posthumously)

Designed, constructed and operated the airplane which at Kitty Hawk, N.C., Dec. 17, 1903, made the first successful flight under its own power and carrying a human operator, thereby making possible the achievements which are now stirring the emotions and pride of the world.

Mrs. Amelia Earhart Putnam

For displaying heroic courage and skill as a
V-6787, A.C.

navigator, at the risk of her life, by her non-stop flight in her plane from Harbor Grace, Newfoundland, to Londonderry, Ireland, on May 20, 1932, by which she became the first and only woman and the second person to cross the Atlantic Ocean in a plane in solo flight, and also established new speed records and elapsed time between the two continents.

Air Marshall Italo Balbo, Italian Air Force
General Aldo Pellegrini, Italian Air Force

In recognition of the Italian mass flight to the United States in 1933.

AWARD OF OAK LEAF CLUSTER TO THE D.F.C.

Captain Eaker, Lts. Doolittle and Hegenberger were also awarded the Oak Leaf Cluster, D.F.C., the first-named for service as relief pilot in the Refueling Duration Flight, January 1 - 7, 1929; Lieut. Doolittle for performing a series of acceleration tests with a PW-7 Pursuit plane, which was put through the most extreme maneuvers possible in order that the flight loads imposed upon the wings of the plane might be ascertained, thereby securing scientific data of great and permanent importance to the Air Corps, and Lieut. Hegenberger for his valuable contribution to aviation in perfecting the instrument landing system.

AWARD OF D.F.C. TO U.S. MARINE CORPS PERSONNEL

Lieut.-Colonel Thomas C. Turner

Extraordinary achievement in aerial flight as Commanding Officer, April 22, 1921, in flight from Washington, D.C. to San Domingo and return.

Major Louis M. Bourne, Jr.

In aerial flight from Miami, Fla. to Managua, Nicaragua, on January 14, 1928.

Major Ross E. Rowell

On July 16, 1927, in Nicaragua, leading flight of five planes in the face of tropical storm, conducted the attack in which the greater part of the enemy were destroyed, and saved the little garrison at Ocotal from almost certain destruction.

Captain Alton N. Parker

Pilot on December 5, 1929, during a flight of exploration over the unexplored regions of the Antarctic.

1st Lieut. Frank D. Weir

1st Lieut. Frank H. Lamson-Scribner

Piloting plane in attack against strong force of bandits in Nicaragua, Jan. 14, 1928.

1st Lieut. Hayne D. Boyden

For extraordinary heroism, initiative and excellent judgment while in command of an air patrol in the attack against the enemy on July 16, 1927, at Ocotal, Nicaragua.

1st Lt. Basil G. Bradley, Executive Officer
1st Lt. L.H.M. Sanderson, Engineer Officer
Charles W. Rucker, Gunnery Sgt., Mechanic
Extraordinary achievement in aerial flight on April 22, 1921, from Washington, D.C., to San Domingo and return.

Chief Marine Gunner Michael Wodarczyk
For extraordinary achievement in aerial flight on Feb. 28, 1928, and March 19, 1928, in Nicaragua.

Master Tech. Sergeant Albert S. Munsch
For extraordinary achievement in aerial flight as pilot in Nicaragua, January 14, 1928.

Major Ralph J. Mitchell

While commander of the Aircraft Squadrons in Nicaragua, he led six-plane patrol in attack against bandits in Nicaragua, June 19, 1930.

Captain Byron F. Johnson

In command of a two-plane patrol in attack against bandits in Nicaragua in the morning and afternoon of June 19, 1930.

1st Lieut. Herbert P. Becker

In command of a 2-plane patrol in attack on a strong force of bandits in Nicaragua on July 22, 1931, and again on July 26, 1931.

1st Lieut. Charles L. Fike

1st Lieut. John N. Hart

Piloting a plane in attacks against bandits in Nicaragua on May 2, 1930 and June 19, 1930.

1st Lieut. John S.E. Young

Piloting a plane in attacks against bandits in Nicaragua on morning and afternoon of June 19, 1930.

2nd Lieut. Raymond P. Rutledge

Piloting a plane in attacks against bandits in Nicaragua on May 23, 1932. Located the crew of a plane lost in the dense jungles and for three days until he was killed in an accident over the jungles, made many flights under extremely dangerous conditions to drop supplies to the stranded crew and to direct a ground patrol that was proceeding to its rescue.

Gunnery Sergeant Neal G. Williams

Piloting a plane in attack against bandits in Nicaragua on July 6, 1932.

Staff Sergeant Gordon W. Heritage

Piloting a plane in attack against bandits in Nicaragua on July 22, 1931.

Sergeant Hilmer N. Torner

While a passenger in an airplane on March 22, 1932, at San Diego, Calif., the pilot became ill and fell forward on the controls in a fainting condition. Torner pulled the pilot from the controls and righted the plane which was falling in a spinning motion from an altitude of approximately 2,000 feet. Although he had never flown a plane, Torner landed it without damage and then administered first aid to the pilot.

AWARD OF D.F.C. TO OFFICERS OF U.S. NAVY

Commander Robert R. Paunack

Saving the dirigible C-8 from destruction on January 3, 1919, by fire, thereby saving the lives of its crew of six.

Rear Admiral Richard E. Byrd (Retired)
Lieut. George O. Noville, U.S.N.R.
New York to France Flight of 1927.

Lieut.-Commander Ben H. Wyatt
Alaskan Aerial Survey Expedition. 1926. Was
in command of expedition during entire time.

Lieut. Delbert S. Cornwell
Attempting to save the life of a passenger
while maneuvering at an altitude of 2,000
feet, the left wing of the plane collapsed.
The plane crashed to a complete wreck, result-
ing in death of passenger and injury to the
pilot (November 18, 1926).

Lieut. (JG) William V. Davis
Dole Air Race, August 16, 1927. Was navi-
gator of the winning plane "Woolaroc."

Lieut. Alford J. Williams
For experimental flights during March, 1928.
Obtaining data and developing methods of con-
trol for airplanes in inverted flight; also
putting planes in tail spins and observing
action, from which observations he developed
procedure to be followed to get planes out of
tail spins. Stayed with one plane in a spin
so long that plane crashed.

Lieut. Wallace W. Dillon, Executive Officer
Lieut. Eugene F. Burkett, Navigator (Dec.)
Lieut. Richard F. Whitehead, Photo Officer
Aided materially in successfully performing
a hazardous and difficult aerial survey of
Southeastern Alaska during summer of 1926.

Claude G. Alexander, Chief Radio Electrician
Alaskan Flight as above.

Lieut. Apollo Soucek
Extraordinary achievement in the art of
high altitude flying, establishing on June 4,
1929, a world's altitude record for seaplanes,
and on June 4, 1930, a world's altitude record
for heavier-than-air craft.

Lieut. George T. Cuddihy (Deceased)
For his discovery of the principle of re-
gaining control of a plane in a tail spin and
for other daring ventures in the realm of ex-
perimentation which contributed toward ad-
vancement of the science of aeronautics.

Lieut. Emory B. Bronte, U.S.N.R.
In recognition of his heroic courage and
great skill as a navigator on the second suc-
cessful airplane flight from California to the
Hawaiian Islands under extreme adverse weather
conditions, July 14-15, 1927.

AWARD OF D.F.C. TO ENLISTED MEN, U.S. NAVY

Harold Irving June, Chief Aviation Pilot
Navy's representative and member of crew of
'Floyd Bennett' which flew over South Pole on
Nov. 29, 1929. Byrd Antarctic Expedition.

Patrick A. McDonough, Chief Photographer
William J. Murtha, Photographer, 1st Cl.
Alaskan Aerial Expedition during summer of
1926, materially aiding in successfully per-

forming a hazardous and difficult aerial survey
of Southeastern Alaska.

Thomas G. Reid, Chief Aviation Pilot
(Posthumously)
Alaskan Aerial Expedition, 1926, as above.

Doyle Joseph Cavin, Aviation Machinist's
Mate.

For extraordinary achievement while partici-
pating in aerial flight from Coco Solo, Canal
Zone, to David, Republic of Panama, on December
14, 1933.

---oOo---

SOME USEFUL 'DOPE' FOR THOSE GOING TO HAWAII

The Wheeler Field Correspondent submitted
some interesting information regarding condi-
tions in the Hawaiian Islands which should
prove very useful to officers now under orders
and those who expect orders for duty in the
Hawaiian Department. He states:

a. Do not buy any white or khaki uniforms
prior to your arrival. A reasonable time is al-
lowed for the procurement of the above, and
Japanese regimental tailors can outfit you com-
pletely in made-to-order style at a much more
reasonable price than mainland tailors. Your
minimum requirements here are as follows:

1 white service uniform complete
1 white mess jacket and vest with black high-
cut tuxedo slacks.

Sufficient blouses, breeches, slacks and
shirts of regulation khaki to permit you to
present a good appearance on all occasions.

b. Bring a good tuxedo. Except when the mess
jacket is prescribed, the tuxedo is worn ex-
clusively during the evening at social functions
or at home.

c. Due to the large amount of over-water fly-
ing engaged in by the Air Corps at this sta-
tion, boots are seldom worn. However, for in-
spections, ceremonies, etc., spurs are pre-
scribed (Air Corps lace boots excepted).

d. Move everything to Wheeler Field that you
would care to take with you to any mainland
station. Bring your furniture, your piano,
radio and books. In fact, bring everything.
Veneered furniture is not affected here any
more so than at any mainland station close to
the sea. You will enjoy your music here as
much as ever. Up-to-date model radios are ca-
pable of excellent mainland reception and, in
addition, Honolulu possesses two modern broad-
casting stations whose programs are enjoyed
throughout the Islands. Our climate is not as
humid and damp as in most tropical locations
so, again - bring your home with you. The
quarters are large and you will not regret
your decision to do so.

e. Shoes are somewhat expensive in Hawaii. It
is recommended that you purchase a sufficient
supply on the mainland to suffice for a period
of two years or so.

f. The automobile question arises. Your
license (yearly) will cost you one cent per
pound, so don't bring a locomotive with you. A
Ford weighs 2,600 pounds - result is \$26.00.

---oOo---

You sketch artists in the Air Corps - how
about sending in cover designs for News Letter?

WAR DEPT. ORDERS AFFECTING AIR CORPS OFFICERS

CHANGES OF STATION: To Langley Field, Va.: Captains Barney M. Giles and John E. Upston for duty with GHQ Air Force, upon completion of present course of instruction at Air Corps Tactical School, Maxwell Field, Ala. - 1st Lt. Stuart G. McLennan for duty with GHQ Air Force upon completion of tour of foreign service - Captain David R. Gibbs, from Philippines, relieved from temporary rank upon date of departure, - Captain Walter Bender, from Chanute Field, for duty with GHQ Air Force.

To March Field, Calif.: 1st Lt. Robert M. Losey, from California Institute of Technology, Pasadena, for duty with 1st Wing.

To Hamilton Field, Calif.: 1st Lt. Richard C. Lindsay and 2nd Lt. William Ball, from Crissy Field - Major Clinton W. Russell from duty on War Dept. General Staff to duty with Station Complement.

To Chapman Field, Miami, Fla.: Major Wm. V. Andrews, from Bolling Field. Relieved from temporary rank May 19, 1935.

To Office, Chief of the Air Corps: 1st Lt. Donald F. Stace, from Brooks Field.

To Washington, D.C.: Captain William L. Ritchie, from Scott Field, Ill., for duty in Office of Assistant Secretary of War. Relieved from temporary rank, June 5, 1935.

To Barksdale Field, La.: Colonel Robert Goolrick, from Wright Field, for duty as Station Complement Commander - 2nd Lieut. Arthur F. Merewether, from duty as student at Mass. Inst. of Technology, for duty with 3d Wing.

To Randolph Field, Texas: Captain Courtland M. Brown from Hawaiian Dept. for flying training with class commencing July 1, 1935.

To Bolling Field, D.C.: Major Leslie MacDill upon completion of present course of instruction at Naval War College, Newport, R.I. Previous orders in his case revoked.

To Philippines: 1st Lt. James F. Phillips from duty as student A.C. Engineering School, Wright Field.

To Hawaiian Department: Major Don L. Hutchins from Hamilton Field. Relieved from temporary rank May 14, 1935.

To Los Angeles, Calif.: Capt. Leon W. Johnson from duty with 2nd Observation Squadron in Philippines and from temporary rank and to pursue course of instruction at California Institute of Technology.

To Houston, Texas: Captain Harry Weddington for duty as Instructor, Air Corps, Texas Nat'l Guard, upon completion of present course of instruction at Air Corps Tactical School.

To Chanute Field, Ill.: 1st Lieut. Samuel V. Stephenson, upon completion of present course of instruction, A.C. Tactical School.

To Fort Leavenworth, Kansas.: Lieut.-Col. Lewis H. Brereton from Panama for duty as Instructor, Command and General Staff School.

To Wright Field, Ohio: Captain Pearl H. Robey from Barksdale Field to duty as student at A.C. Engineering School. Relieved from temporary rank, August 1, 1935.

RETIREMENT: Captain Frederick A. Johnson, April 30, 1935.

ORDERS REVOKED: Assignment of 1st Lieuts. Dudley D. Hale and Warren H. Higgins to Panama Canal Department - assignment of Major Eugene A. Lohman, March Field, as Instructor as Command and General Staff School, Ft. Leavenworth.

PROMOTIONS: to 1st Lieutenant: 2nd Lieuts. George F. Kohoe, rank April 4th; Roy H. Lynn, rank April 5th.

DETAILED TO AIR CORPS: 2nd Lieut. Stephen O. Fuqua, Jr., to Randolph Field, Texas, July 1, 1935, for primary flying training.

1st Lt. Maurice C. Bisson to Hawaiian Dept. upon completion of present course of instruction at Air Corps Technical School.

----oOo----

TEMPORARY PROMOTIONS

To Lieut.-Col.

Major Shiras A. Blair, Station Complement Commander, Mitchel Field, N.Y., May 2, 1935.

Captain Claude E. Duncan, Executive and Operations Officer, 1st Wing, March Field, Calif., May 2, 1935.

To Captain

1st Lt. Roland O.S. Akro, Adjutant, Station Complement, Mitchel Field, May 2, 1935.

2nd Lt. Eugene H. Beebo, Adjutant, 1st Wing, March Field, Calif., May 2, 1935.

1st Lt. Alva L. Harvey, Flight Commander, 49th Bombardment Squadron, Langley Field, May 2, 1935.

1st Lt. Don W. Mayhue, Intelligence and Communications Officer, 3d Wing, Barksdale Field, La., May 7, 1935.

1st Lt. James S. Stowell, Director, clerical, A.C. Technical School, Chanute Field, May 7, '35.

To 1st Lieut.

2d Lt. David H. Baker, Armament Officer, 78th Pursuit Squadron, Panama.

2d Lt. Hubert P. Dellinger, Chief Inspector, Philippine Air Depot, May 3, 1935.

2d Lt. Aubrey K. Dodson, Supply Officer, 11th Bombardment Squadron, May 11, 1935.

2d Lt. Robert E.L. Eaton, Supply Officer, 1st Bombardment Squadron, Mitchel Field, May 2, 1935

2d Lt. Robin B. Epler, Communications Officer 7th Obs. Squadron, April 25, 1935.

2d Lt. Flint Garrison, Jr., Engineering Officer, 24th Pursuit Squadron.

2d Lt. Robert L. Scott, Jr., Communications Officer, 78th Pursuit Squadron, Panama.

2d Lt. Albert W. Shepherd, Engineering Officer, 74th Pursuit Squadron, Panama.

2d Lt. Norman D. Sillin, Armament Officer, 29th Pursuit Squadron, April 25, 1935.

2d Lt. James D. Underhill, Armament Officer, 7th Observation Squadron, April 25, 1935.

----oOo----

Captain Ira R. Koenig, assigned as commander of the 1st Balloon Squadron, was advanced to rank of Major, effective May 7, 1935.

----oOo----

Cpts. Melie J. Coutlee, Bernard A. Bridget, 1st Lts. George F. Hartman, Millard C. Young and Daniel F. Callehan, Jr., are relieved from temporary rank on date of departure from Panama.

V-6787, A.C.

CATERPILLAR CLUB PASSES 700 MARK

The Caterpillar Club, mythical in character insofar as its status as a bona fide organization is concerned, is continually adding new members to its fold and, so far as it has been possible to ascertain, there are at this writing 705 names on its roster - 697 men and 8 women - who were saved by the parachute.

The number of emergency parachute jumps totals 738, since thus far 28 men made two emergency jumps each; one, Major Frank O'D. Hunter, Air Corps, three; and one, Colonel Charles A. Lindbergh, the High Potentate of the Order of Caterpillars, four jumps.

There are listed below the names of those who made emergency jumps since January 1, 1934. The accuracy of this roster is not vouched for, since it is well nigh impossible to keep an accurate check on emergency jumps made by civilian flyers. For example, only just recently, attention was invited to the case of Miss Babe Smith, who on July 17, 1932, almost three years ago, became eligible for initiation into the Caterpillar Club as the outcome of a practice parachute jump. The shrouds of the pilot chute hooked over her foot when she

"bailed" out at 2,000 feet, effectually preventing the opening of the main chute. Her strenuous efforts to shake the shroud lines free proved without avail, and finally, at 200 feet, she opened her emergency parachute and landed without injury.

Some may question the propriety of admitting to membership in the Caterpillar Club airmen or airwomen who made parachute jumps under such or similar circumstances, since there was no aircraft failure during flight.

Early in the history of the Caterpillar Club, when names were eagerly sought of those who were saved by the parachute to justify the existence of this mythical society, two men were admitted to membership who made practice jumps and found it necessary to use their emergency parachute in order to effect a safe landing. It was then contended that the main consideration involved in eligibility for membership was the fact that the parachute was instrumental in saving the life of the jumper in the extreme emergency, and this policy was since adhered to in similar cases which followed - and there were quite a number of them.

ROSTER OF CATERPILLAR CLUB, JANUARY 1, 1934 TO MAY 1, 1935

No.	Date 1934	Name	Rank	Place of Jump
617	January	George Yeschke	Civilian	Pittsburgh, Pa.
618	January	Edward W. Anderson	2nd Lieut. Air Corps	Imperial, Pa.
619	January	J. F. Gauterbine	Civilian	Vancouver, Washington.
620	January	Beirne S. Lay, Jr.	2nd Lieut. Air Reserve	Langley Field, Va.
621	January	Marlin Eddy	Staff Sgt. Air Corps	Langley Field, Va.
622	January	Levin T. Miller	Corporal, Air Corps	Langley Field, Va.
623	January	Stanton R. Armistead	Civilian	Montgomery, Ala.
624	February	Donald W. Eisenhart	Flying Cadet, Air Corps	Near Kelly Field, Texas.
625	February	Demas T. Crow	1st Lieut. Air Corps	Wheeler Field, Hawaii
626	February	Royden E. Beebe	2nd Lieut. Air Corps	Wheeler Field, Hawaii
627	February	Charles H. Anderson	2nd Lieut. Air Corps	Selfridge Field, Mich.
628	February	A. G. Gaden	Lieut. (JG) U.S. Navy	Near Pearl Harbor, T.H.
629	February	S. D. Kamrar	A.C.M.M., U.S. Navy	Near Pearl Harbor, T.H.
630	February	C. P. May	A.C.M.M., U.S. Navy	Near Pearl Harbor, T.H.
631	February	W. L. Gruber	Aerog. 1st Cl. U.S. Navy	Near Pearl Harbor, T.H.
632	February	L. A. Bowen	A.M.M., 3d Class, U.S.N.	Near Pearl Harbor, T.H.
633	February	T. P. Goley	A.M.M., 1st Cl., U.S.N.	Near Pearl Harbor, T.H.
634	February	Ray Martinez	Civilian	San Mateo, Calif.
635	February	John H. Gibson	2d Lieut. Air Reserve	Mansfield, Ohio.
561	February	Norman R. Burnett**	2d Lieut. Air Corps	Freemont, Ohio.
636	March	D. L. Noyes	Civilian	Near Fredericksburg, Va.
637	March	Paul D. Bunker	2nd Lieut. Air Corps	Near Edgard, La.
638	March	Victor L. Anderson	Flying Cadet, Air Corps	Near Kelly Field, Texas.
639	March	W. L. Corliss	Ensign, U.S. Navy	San Diego, Calif.
640	April	N. H. Crumley	2nd Lieut. Air Reserve	Winfield, Pa.
641	April	D. H. Baxter	2nd Lieut. Air Corps	Winfield, Pa.
642	April	W. G. LeTarte	Private, Air Corps	Winfield, Pa.
643	April	Carlos L. Reavis	Civilian	Denver, Colorado.
644	April	Francis R. Drake	Flying Cadet, Air Corps	Near Laredo, Texas.
645	April	J. C. Pennington	Flying Cadet, Air Corps	Bracken, Texas.
646	April	George A. Hatton	Ensign, U.S. Navy	Pensacola, Fla.
647	April	Hugh Herndon, Jr.	Civilian	Palmetto, Georgia
648	April	Ed. Sherman	Civilian	Palmetto, Georgia
649	April	Albert R. Jackson	Civilian	Little Falls, Minn.
650	May	James O. Foster	Civilian	Birmingham, Ala.
651	May	David P. Levy	Civilian	Wichita, Kansas.

<u>No.</u>	<u>Date</u> <u>1934</u>	<u>Name</u>	<u>Rank</u>	<u>Place of Jump</u>
652	May	7 Gilmore V. Minnis	Flying Cadet, Air Corps	Near Kelly Field, Texas
653	May	9 Edwin A. Warren	2nd Lieut. Air Reserve	Selfridge Field, Mich.
654	May	9 Joe Gonzales	Staff Sgt. Air Corps	Davison, Mich.
655	May	15 J. Stanley Holtoner	Flying Cadet, Air Corps	Near Kelly Field, Texas
656	May	16 William M. Marks, Jr.	Flying Cadet, Air Corps	Castroville, Texas
443	May	28 Neal E. Ausman **	2nd Lieut. Air Corps	Chorrera, Panama
657	May	30 Nels O. Sondergard	Civilian	Lake Zurich, Ill.
658	May	31 Frederick W. Soule	Civilian	New Haven, Conn.
659	June	10 Jack A. Becke	Civilian	Dallas, Texas
660	June	12 Ely M. Kinney	Civilian	Schenectady, N.Y.
371	June	14 Paul Hovgard **	Civilian	Lancaster, N.Y.
661	June	24 Herbert H. Mills	Capt. Comm. Nat'l Guard	Rutland, Vermont
662	July	9 David B. Young	Lieut. U.S. Navy	Winter Harbor Shoals, Maine
663	July	9 J. W. Murray	P.M., 2d Class, U.S. Navy	Winter Harbor Shoals, Maine
664	July	13 Frank G. Irvin	1st Lieut. Air Corps	Wright Field, Ohio
56	July	24 Bernard A. Bridget **	1st Lieut. Air Corps	France Field, Panama
665	July	29 Orvil A. Anderson	Captain, Air Corps	Holdrege, Nebraska
666	July	29 William E. Kepner	Major, Air Corps	Holdrege, Nebraska
667	July	29 Albert W. Stevens	Captain, Air Corps	Holdrege, Nebraska
668	August	7 Henry G. Thorne	Private, Air Corps	Atlanta, Texas
669	August	7 Archie J. Old	2nd Lieut. Air Reserve	Atlanta, Texas
670	August	10 Lester R. Williams	2nd Lieut. Air Reserve	Logansport, La.
671	August	20 S. D. Grubbs, Jr.	2nd Lieut. Air Corps	Kelly Field, Texas
672	August	28 W. H. Morris	Flying Cadet, Air Corps	Randolph Field, Texas
673	September	22 James O. Simmons	Flying Cadet, Air Corps	Summerfield, La.
450	September	27 James M. Treweek **	Private, Air Corps	Cumberland, Ohio
674	October	2 Fay W. Olmstead	Flying Cadet, Air Corps	Dead Man's Gulch, Calif.
675	October	2 Edward J. Hale	2nd Lieut. Air Corps	Near Kelly Field, Texas
676	October	3 W. G. Mullins	Lieut. U.S. Navy	Near Guantanamo, Cuba
677	October	4 Warren R. Carter	Captain, Air Corps	Browns, Alabama
678	October	9 Thomas J. Gaughen, Jr.	2nd Lieut. Air Reserve	Waldenburg, Mich.
679	October	18 Arthur Prestridge	Private, Air Corps	Redwater, Texas
680	October	18 Leroy A. Rainey	2nd Lieut. Air Reserve	Redwater, Texas
681	October	31 William D. Eckert	2nd Lieut. Air Corps	Fox Hill, Va.
682	November	5 Rodney E. Jones	Flying Cadet, Air Corps	Fort Eustis, Va.
683	November	6 Earle G. Harper	Captain, Air Corps	Bismarck, Ill.
684	November	6 Frank H. Berfield	Private, Air Corps	Bismarck, Ill.
685	November	6 Joseph E. Daley, P	Private, Air Corps	Bismarck, Ill.
686	November	6 William E. Browning	Civilian Observer, A.C.	Bismarck, Ill.
687	November	8 Julius T. Flock	1st Lieut. Air Corps	Fowlerton, Texas
232	November	8 Stevens G. Bancroft **	Ensign, U.S. Naval Reserve	Everglades, near Miami, Fla.
688	November	24 C. L. Smith	1st Lt. Minn. Nat'l Guard	Diamond Bluff, Wis.
260	November	28 Robert G. Chew **	Air Mail Pilot	Scottsboro, Alabama
689	December	12 Anthony G. Eubanks	Flying Cadet, Air Corps	Near Boerne, Texas
690	December	12 G. S. Buchanan	Flying Cadet, Air Corps	Brooks Field, Texas
691	December	14 F. L. Anderson	2nd Lieut. Air Corps	Pacific Ocean (San Francisco)
692	December	14 D. R. MacVean	Sergeant, Air Corps	Pacific Ocean (San Francisco)
1935				
693	January	11 Charles W. Wellman	Corporal, Air Corps	Brooksville, Indiana
694	January	19 F. R. Cook	Flying Cadet	Cortoro, Arizona
695	March	5 Clarence D. Fields	Staff Sgt. Air Corps	Pescado River, Panama
696	March	6 John H. Price	Sergeant, Air Corps	Near Centerville, Texas
697	March	16 A. R. Radford	Lt.-Comdr. U.S. Navy	Near Woodville, Texas
698	April	4 John F. Guilmartin	Flying Cadet, Air Corps	Colton, Calif.
699	April	5 Daniel S. Campbell	2nd Lieut. Air Corps	Pearl City, Hawaii
700	April	8 A. B. Thompson	Lieut. (JG) U.S. Navy	Ramona, Calif.
701	April	8 J. Hulme	Lieut. (JG) U.S. Navy	Ramona, Calif.
702	April	8 H. G. Holden	Seaman, 1st Cl. U.S. Navy	Ramona, Calif.
703	April	15 William C. McDonald	Sergeant, Air Corps	Ashland, Ky.
704	April	17 John W. Green	Civilian	Boston, Mass.
705	April	17 John B. Ackerman	2nd Lieut. Air Corps	Kelly Field, Texas.
Addenda				
1932				
491a	July	17 Babe Smith	Civilian	Akron, Ohio.

NOTE: ** Second emergency parachute jump.

It is interesting to note that among the emergency parachute jumps recently made, the one by Sergeant John H. Price, on duty at the San Antonio Air Depot, not only constituted his first jump but also his first accident. A skilled pilot of several years' experience with practically all types of Army planes as well as with commercial craft, he had a total of 6864 pilot hours to his credit, including 436 hours on transport planes.

Sgt. Price was returning to San Antonio Air Depot from Barksdale Field, La., in a Bellanca transport plane with two engines as cargo. There were no passengers. While flying over the heavily wooded country of East Texas, and after passing under a small line squall near Grapeland, Texas, and crossing the Trinity River at about 100 feet, he was regaining the necessary flying altitude for that region and had reached some 500 feet, when the motor cut out. He attempted to bring the plane down but, finding this impossible, with its rapid loss of altitude, was forced to jump, after some exceedingly strenuous and hair-raising efforts in getting clear of the craft, at a height estimated by him, and also said to have been estimated by witnesses, of about 100 feet. He landed somewhat on his left side, sustaining sundry bruises, lacerations and a sprained ankle. The fact that he landed in soft, loose sandy soil no doubt saved him from more serious injuries.

The pilot had the unusual experience of landing first with his parachute before the plane itself came down. He said everything happened so fast that he didn't have time to experience any particular emotion or sensation except that of terrific speed, but immediately on landing looked toward the falling plane and thought what a pity it was that such a splendid ship was going to crash.

Forced to "bail out" of a Pursuit plane while flying over unfavorable terrain when the engine failed to take on switching over to the main tank, Flying Cadet F.R. Cook stated that he was impressed by the authority of the chute as it opened, he being only 200 feet above the ground. He was knocked unconscious on landing, had no recollection of the manner in which he hit, and after he came to "suffered from a bad case of jitters for a while." Immediately on coming to he could not remember having jumped at all.

During the course of acrobatic flying in Hawaii, the plane piloted by 2nd Lieut. Donald S. Campbell went into an outside spin from the top of a loop. His efforts to regain normal flight proved in vain, as the plane would not answer to the controls either with the throttle open or closed. Unbuckling his safety belt, he was immediately thrown clear of the plane. He stated he had no doubt that the parachute would function, but nevertheless had a feeling of satisfaction when he felt the jerk of the opened parachute. The chances are good that all the 705 Caterpillars felt the same way when they went through

their initiation into the Club.

Second Lieut. John B. Ackerman, student at the Advanced Flying School, Kelly Field, returning from a night flight, was forced to make a parachute jump, 12 miles southwest of San Antonio, when motor trouble developed. He released a flare as he made preparations to jump, whereupon the motor cut back in. Several moments later the engine cut out again, and when he released another flare the engine immediately cut in once more. After climbing from 2500 feet to 3,000 feet, the engine cut out for the third time - in earnest. The gasoline gauge indicated that he had almost 30 gallons of fuel, but switching from auxiliary to main tank several times brought no results. By that time he was at an altitude of 1500 feet and he could see that he would be unable to make the field. After he jumped he stated he experienced no sense of falling. The jerk caused by the opening of the parachute caused him to lose both the ripcord and the flashlight he was holding. He landed in a small bush which checked the force of his fall.

Sergeant William C. McDonald, a member of the famous acrobatic team, termed "The Men on the Flying Trapeze," was initiated into the Caterpillar Club near Ashland, Ky., while flying in an airplane which the U.S. Marine Corps had assigned to the Air Corps Tactical School at Maxwell Field. Fate decreed that the engine should cut out while Sgt. McDonald was flying over terrain where a forced landing would be decidedly unhealthy. He had no recourse other than to resort to his parachute, and dived headfirst from the left side of the cockpit at an altitude of about 500 feet. Clear of the plane, he yanked the rip cord. "The fact that the chute had opened," Sgt. McDonald stated, "was a very pleasant realization." Upon touching terra firma, he was immediately whisked off his feet and the chute proceeded to drag him along the ground until he was able successfully to tackle a cement mail box post.

---oOo---

CHANGES IN ASSIGNMENT OF OFFICERS CARRYING TEMPORARY INCREASED RANK.

Captain Edward H. Underhill from Engineer Officer, 81st Service Squadron, to duty as Intelligence and Operations Officer, 40th Attack Sq.

Capt. Otto P. Weyland, from Secretary, A.C. Advanced Flying School, to duty as Intelligence and Operations Officer, 9th Observation Sqdn.

Capt. James B. Burwell from duty as Intelligence and Operations Officer, 39th Obs. Sqdn., to duty as Secretary, A.C. Advanced Flying School.

Capt. John T. Sprague from 49th Bombardment Sqdn. to Flight Commander, 20th Bomb. Sqdn., Langley Field, Va.

Capt. Robert H. Kelly from 12th Obs. Sqdn., Brooks Field, to duty as Intelligence and Operations Officer, 88th Obs. Squadron.

Capt. Harold M. McClelland assigned as C.O., 19th Bomb. Group, effective April 20, 1935.

V-6787, A.C.

Flying blind over mountains at 20,000 feet in a dust storm, in complete darkness, with static playing pranks with radio beacon signals and his fuel supply running low, Private V.V. Poupitch, Air Corps enlisted pilot, stationed at Brooks Field, Texas, refused to desert his ship and succeeded in landing without injury to himself and passenger in the mountains in Chihuahua, Mexico, by spiralling around the line of sparks of two flares, one of which he released at about 17,000 feet and the other at about 9,000 feet, the dust preventing the flares burning at their usual intensity.

Private Poupitch, accompanied by Corp. M.L. Smith, left Brooks Field on an approved airways cross-country flight to Fort Worth, Tex.; Oklahoma City, Okla.; Amarillo, Texas; Albuquerque, N.M.; Winslow, Kingman, Aztec and Tucson, Arizona; El Paso and Midland, Texas, and return to Brooks Field. He reached Tucson the same day and left the following afternoon at 4:20 p.m., for El Paso, setting the compass course to 90 degrees to allow for a very strong north wind. The next check point before darkness was about 20 miles east of Rodeo, Ariz., at about 5:20 p.m. Flying then at 10,000 feet, darkness and a dust storm enveloped him.

"When I left Tucson," Private Poupitch stated, "I had four hours' fuel. As the journey from Tucson to El Paso was only a two-hour flight with an C-43, I had two hours' fuel as a safe margin. In view of former weather training and receiving suitable weather reports by radio at El Paso, having sufficient fuel and receiving the oncourse signal, and fully equipped for night flying, I saw no need to turn back to Tucson or to try and land at the first available place. As I approached El Paso, the weather reports by radio changed from four miles' visibility to two miles' visibility, and extreme static which at times completely cut out the El Paso radio beacon. This I later found out to be caused by local atmospheric conditions and charged dust.

After nearly two hours had elapsed from the time of take-off at Tucson, I estimated that my position was near El Paso, and began to concentrate on the cone of silence. I began to receive a slightly off-course signal, and turned to correct for it, climbing at the same time to avoid hitting any mountains, and also to have a better working area with the cone of silence, in view of the flying conditions.

At 20,000 feet I was also blind and began to fly by instruments at 6:00 p.m. The off-course signal began to predominate; and it took some time before I hit the oncourse signal again. But then the signal began to weaken, and after a reasonable length of time, I was sure that I was going away from the station; so I turned 180° and started back. I received the oncourse signal again; the volume increased, even though I turned it down on the receiver, indicating that I was going toward my station. When I began to turn down the volume, the static increased. I had been receiving static on the

receiver and upon turning down the volume, this static increased to the extent that it prevented my hearing the radio beacon. Even though I maintained my course in both directions, I could not find the cone of silence. Then I began to fly the other legs to ascertain if I could hit the cone of silence at an estimated intersection. Judging by time, the same thing began to take place as on the east and west legs: extreme static, interference with radio receipt, all of which prevented me from finding the silence cone. I then began to circle around to where I thought the cone might be, and gradually tightened the circle, but failed to find it. I began to check my beacon map again to orient myself in the quadrants when I could receive the signal; and when I locked up, I had unconsciously stalled the ship and was in a spin. I recovered at 17,000 feet and saw my fuel gauge read slightly above zero, and that the artificial horizon was out of sight.

I conveyed to the mechanic, Corp. M.L. Smith, that I had no idea as to where we were, but that we had 17,000 feet which was sufficient to safely avoid possible mountains in the event that a parachute jump became necessary. When I looked back at Corp. Smith, he already had the rear cockpit open, and one foot over the side of the ship. He inquired as to whether I was going to jump, and upon my reply that I was not, but was going to make an effort to save the ship, he climbed back into the ship and, despite my advice to jump, he stated he would stay with me regardless of consequences.

I dropped a flare and it showed very little on account of the dust, but exhibited merely a blaze of light in the immediate vicinity of the flare. I was hoping that it would reveal any possible mountain range or peak below us. The Sperry horizon failed to function after the spin, and when I saw the flare burning, it emitted a stream of sparks which formed a vertical line and I could then establish a horizon. It indicated to me that so long as the sparks were descending vertically I had that much altitude and that no intervening obstructions existed below.

I spiralled tightly around this stream of sparks to avoid any other obstacles, mountains, etc., which I would be unable to detect on account of the visibility, and quickly lost my altitude. When the flare burned out, I released a second flare at about 9,000 feet, when I again succeeded in establishing a horizon by the line of sparks, and again descended rapidly.

I had both of the landing lights on when I suddenly approached the ground and estimated that I was about 100 feet above it, in a dive and a speed bank. The motor began to sputter when I leveled off and prepared to land in that exact spot. I struck the ground once, wheels first. The flare which had been above us, went out and I bounced. I tried to 'jockey' the ship and ease it down in the darkness, since I was wholly unaware, of course, of what I might strike. I landed and rolled for some distance, when I could feel the ship being stopped rapidly. Suddenly, it nosed over. The tail came right down and Corporal Smith and I climbed out."

NOTES FROM AIR CORPS FIELDS



Hamilton Field, Calif., April 20th.

In a beautification drive which will make Hamilton Field the garden spot of Marin County, the post nurseries are issuing to the military personnel 15,000 chrysanthemums, 7500 assorted Iris, 5,000 Canna, 10,000 Gazinia, 2,500 Geranium and 7,500 Messenlerganthemum. Lieut. Robert E. Cron, Asst. Constr. Quartermaster, has charge of the issue of these flowers.

Hamilton Field personnel have an opportunity to study in technical research work. A technical library has been fitted up in a room on the ground floor of post headquarters.

Major-General Paul B. Malone, 9th Corps Area Commander, inspected the personnel and buildings of the field on April 6th and expressed himself as being well satisfied with the station. Thirteen Martin Bombers passed his reviewing station in an aerial review.

On the afternoon of Army Day, Lieut.-Colonel Clarence L. Tinker led the 7th Bombardment Group in bombing maneuvers over Crissy Field. An attack by Pursuit planes was beaten off as delighted spectators gasped.

Seven out of nine Reserve officers whose term of active duty expired secured a continuation of their tours for two months, effective April 15th, viz: 2nd Lieuts. Noble O. Sprunger, Benton R. Baldwin, Joseph P. Bohl, Orvis M. Nelson, Duncan J. Powers, James E. Roberts and Nathan F. Searles. Lieuts. Henry M. Celik and Marvin J. Griggs became private citizens on April 16th.

Lieut. Frederick L. Anderson, transferred here from Crissy Field, took up his duties as Police and Prison Officer and Provost and Fire Marshal.

Lieut.-Col. Glenn I. Jones, Medical Corps, who is touring overland by automobile from Washington, D.C., to Hamilton Field, will take up his duties as Post Surgeon upon his arrival here.

Sixty-six motor vehicles total the land mobility of the 7th Bombardment Group at this field. Of the latest type, these vehicles could speed over 70 miles an hour if they were not throttled down. The classification shows three Columbia tankers of 1,500 gallons each, a Coleman tanker of 1200 gallons; 13 motorcycles; 12 Chevrolet reconnaissance trucks; 9 Federal; 18 Dodge, 1½-ton; 7 Dodge, ½-ton; and 3 Dodge Panel Delivery trucks. The guards who use motorcycles on their beats no longer have to pound the pavements in the night.

Flying Cadet Verne A. McDermont, stationed at this field, recently received his commission as 2nd Lieut., Air Reserve.

Three enlisted men at this station received

the Yangtze Medal for participation in the Shanghai Expedition, February-July, 1932, viz: Pvts. Harold H. Harris and Wm. S. Bradley, 70th Service Squadron, and Orville E. Vandemark, Quartermaster Detachment.

A danger zone was marked out on the waters of San Pablo Bay, east of Hamilton Field, because of machine gun firing from planes at targets along the seawall.

Lieut. W.R. Agee was ordered to Rockwell Field on April 5th to pursue a three months' course in Instrument Flying and Aerial Navigation. Flying Cadet R.C. Streater was transferred to Selfridge Field, Mich. March 31st.

Brooks Field, San Antonio, Texas, April 30.

Lieut.-Col. E. L. Hoffman, Commanding Officer, is scheduled to leave about May 15th for Rapid City, South Dakota, to make parachute installations on the Stratosphere Balloon which is to make its ascent from that point. Colonel Hoffman is considered one of the foremost authorities on parachutes today. He received the Collier Trophy for his invention of a triangular type parachute which gives a slower rate of descent and, when not in use, occupies a smaller space than the circular type parachute.

An inspection was made of Brooks Field buildings, personnel and equipment by Assistant Secretary of War Woodring on April 15th, this constituting one of the series of inspections made by him covering most of the military flying fields in the country. On landing at Brooks Field, Mr. Woodring was met by Lieut.-Col. Hoffman and his staff and, accompanied by them, made a complete inspection of enlisted personnel and pilots who were with their planes in field inspection order. Following the inspection, all planes participated in an aerial review, after which all motor transport vehicles passed in review.

Philippine Air Depot, Nichols Field, P.I.

During March, the engineering section overhauled one B-3A airplane, one RL340C, one SRL340D, four RL690B engines and sent five engines to storage awaiting block test.

Major John G. Colgan left March 23rd for two months' leave in China and Japan. Captain Albert B. Pitts is now in command.

Upon returning from detached service in Baguio, Captain Alfred L. Jewett assumed the duties of Assistant Depot Supply Officer.

Capt. Charles W. O'Connor left April 1st on 20 days' detached service at Baguio.

Lieut. Heubert P. Dellinger, who reported for duty, was detailed as Chief Inspector.

Advanced Flying School, Kelly Field, Texas.

Hon. Harry H. Woodring, Assistant Secretary of War, made an inspection of Kelly Field on April 15th. The airplanes were lined up in their customary position for student training by sections. Instructors and students were first inspected on the ground in front of the airplanes to which they were assigned. Following this, the Assistant Secretary witnessed the take-off and routine training of students. He expressed satisfaction with the Advanced Flying School before leaving us for Barksdale Field.

Such visits always awaken in the minds of those stationed at Kelly Field a new hope that some day this post will be rebuilt as have most other Air Corps stations in the United States.

According to a press dispatch, 2nd Lieut. Jephtha Wesley Fator, Air Reserve, age 29, was killed in an airplane accident near Bogota, Colombia, on April 15th. No details of the accident are available at this time. Lt. Fator had two brothers, also associated with the Air Corps. Lieut. Lilburn D. Fator is now on duty in the Philippine Islands, and his brother, Charles D., was retired from the Air Corps and now lives in San Antonio, Texas.

Clark Field, Pampanga, P.I., April 6th.

Major G.E. Brower, Commanding Officer, was a member of a flight that made an aerial survey of the northernmost islands of the Philippine Archipelago, piloting Colonel Dosser, Governor of the Mountain Provinces. This necessitated more than four hours over-water flying in the rough Balintang Channel, and the Amphibian escort was most welcome. This completes Major Brower's coverage of the Archipelago, as he has flown over Y'ami Island (in sight of Formosa), over Sitankai (the southernmost point in sight of Borneo), and from the eastern coast of Mindanao to Puerto Princesa in Palawan. The most noteworthy feature of the wind-swept northern islands was the universal stone construction of the dwellings, very similar to the Korean type. Two sites for development into landing fields were located.

The Squadron (3rd Pursuit) as a whole is well up on the Training Directive. However, the shortage of equipment necessary for Instrument Flying (having only one plane so equipped) will probably cause a little difficulty in completing that phase.

The post baseball league is coming along fine, the Air Corps now holding down second place. We expect to bring home the cup when the season ends.

Mitchel Field, L.I., New York, May 4th.

As of March 1st, under the organization of the GHQ Air Force, the 61st Service Squadron, Air Corps, experienced considerable changes in personnel. Staff Sergeants Goulla, Highley, Kramberg, Marley, Pollack and Yanconish, Sgts.

Courtney, Leonard, Mannion and Roberts, Corp. Florack, six Privates, 1st Class, and 39 Privates were transferred from this organization. The old-timer among these men is Staff Sgt. Goulla, who served eight years with this organization.

We received by transfer Master Sgt. Starling, Staff Sgt. Hunt, Sgt. Moore, 19 Privates, 1st Class, and 50 Privates.

The officers and men of the 61st extend good luck to our former members and a welcome to our new ones.

Capt. Miller returned from leave recently and assumed command of the organization.

Mitchel Field's basketball team completed a most successful season recently by winning for the third consecutive year the Harbor Service League championship. This League is composed of seven teams, one Navy, one Marine and five Army. These teams played two games with each other during the season. At the close of the season games were played with other service teams, the only loss being to Bolling Field by one point. The personnel of the team consisted of Lieuts. D.W. Smith, C.E. Flaherty, F.H. Miller, Sgt. Wilson, Corporals Seberle, Rees, Head, and Pvts. Unger, Hartwig, Lappin, Aertgerts and Harmon.

Fort Sill, Okla., May 3rd.

The 1st Balloon Squadron expects to receive in the near future a 50,000 cubic ft. supply of Helium gas which will be used to inflate a Type C-3 Observation Balloon for experimental purposes.

On Army Day, April 6th, the personnel of Post Field entertained approximately 2500 visitors who passed through the Air Corps hangars and viewed the various types of equipment exhibited for their benefit. The hangars were open for public inspection from 12:00 noon to 5:00 p.m.

Most of April was spent in policing the entire Post Field area, and now that this is over the old place doesn't look the same.

The Air Corps basketball team made a creditable showing in the Post League during the past season. The baseball team recently defeated the Medical Detachment, 13 to 2.

Master Sgt. Mansfield, who has been with the 1st Balloon Squadron since its arrival at Fort Sill in June, 1929, sailed for Panama to replace Master Sgt. Ralph J. Rumpel, who is now with the Squadron. We all join in wishing Sgt. Mansfield and family a pleasant voyage and in welcoming Sgt. Rumpel to this outfit.

Staff Sgt. Sossen was detailed as Squadron Supply Sergeant, and Tech. Sgt. Stimmel, after two years S.D. with Finance and Q.M.C., has taken over the Sgt. Major's duties for Air Corps troops.

On April 2nd, Major-General Simonds, Deputy Chief of Staff, and party, with Captain Hez McClellan, pilot, visited Fort Sill.

On April 12th, Hon. Harry H. Woodring, Asst. Secretary of War, with Lieut. Townsend Griffis as pilot, arrived from Amarillo, Texas. The 1st Field Artillery Band and Color Escort from

the 3rd Battalion, 29th Infantry, were in formation on the concrete apron in front of the hangar to render the customary honors. One battery of 75 mm. guns, in position just west of the landing field, fired the salute of 17 guns upon arrival and departure of the Assistant Secretary.

A series of communications tests between an airplane, equipped with a GM 202 Transmitter and BCMA 179 Receiver, and the new SCR 179 Ground Set, have been carried out with excellent results. Voice reception was exceptionally good.

Air Corps troops entered a baseball team in the Staff Troops Baseball League. After two weeks's practice, the team appears to be a likely contender for the championship.

Both O-19E planes of Flight "E" are now equipped with hoods for instrument flying.

Wheeler Field, T.H., April 18th.

The 26th Attack Squadron completed phase three of the Chemical Warfare Training. The Squadron has drilled and carried on routine hangar duty while wearing gas masks. The Squadron is equipped with 8 A-3 airplanes, which are used for flying training of the 18 pilots assigned and attached; one airplane observer; one flight surgeon; instrument flying for 56 pilots of the 18th Pursuit Group; and flying time for enlisted men from all squadrons in this Group.

The 18th Pursuit Group began its annual gunnery work at the Wing Gunnery camp at Waimanalo on April 15th. The Squadrons of the Group go to camp this year and operate as detached squadrons on the following schedule: April 15th, 19th Pursuit; April 29th, 6th Pursuit; May 13th, 26th Attack.

While at Waimanalo, squadrons will fire for record and conduct a few field exercises.

The inter-squadron baseball tournament at Wheeler Field was recently terminated for the 1935 season, and for the second consecutive year the 6th Pursuiters captured the laurels, emerging from the inter-organization competition with an undefeated slate. The 19th Pursuit, runners-up, dropped two games to the 6th Pursuit.

The airmen have a big job facing them defending the championship Army laurels for the entire Division and Department they fought for and held during 1934.

Luke Field, T.H., April 18th.

During the past month, approximately 6 officers and 18 enlisted men, with three to five Observation airplanes of the 4th and 50th Observation Squadrons, under the command of Maj. Lucas V. Beau, Jr., were stationed at Bellows Field, Waimanalo, T.H. Towing targets for the 64th Coast Artillery (A.A.) was the principal line of endeavor.

Continuous formation of clouds over the Koolau Range prevented high altitude bombing by the 72nd Bombardment Squadron the past week. Strong northeast trade winds and the

Koolau Range seem to form a perfect combination for the production of cloud masses.

Having nosed out the 23d Bomb. Sqdn. for the post track championship in February, the 72nd Bomb. Sqdn. again took the measure of the 23rd in the post finals for baseball on April 10th.

On April 4th, Luke Field and the 5th Composite Group were inspected by Major-General Hugh A. Drum, new Department Commander. An impressive aerial review, followed by a demonstration of Bombardment tactics (23d and 72d Bomb. Squadrons) were given in his honor.

Hawaiian Air Depot, Luke Field, T.H.

The Hawaiian Air Depot just completed the assembly of ten B-4A airplanes shipped to the Hawaiian Department following overhaul by the Rockwell Air Depot. Production is meeting requirements, and it is anticipated that not later than July 15th there will be no airplanes in this Department past due for overhaul. This will be the first time in more than three years that the Engineering Section of the Depot has been in such a favorable position insofar as aircraft overhaul is concerned. Another indication of improvement in production in the Engineering Section is that prior to April 30th all airplanes received by the Depot before Jan. 1st were completely overhauled and returned to their organizations for use.

Due to difficulty in securing satisfactory results through the use of enlisted men in aircraft fabric work, authority was requested and obtained for the hiring of civilian aircraft fabric seamstresses. After a short trial it is apparent that this plan, copied from the San Antonio Depot, will be productive in results and will materially speed up the production in the fabric unit of this Depot.

41st Division Aviation, Felts Field, Spokane.

The Washington Department of the American Legion will stage this month its "First Airplane Round-Up" of memberships as a result of a co-operative program worked out with Adjutant General Maurice Thompson, 41st Division Aviation, and Homer R. Jones, State Legion Commander.

For officers of the Division Aviation, the Round-Up will furnish an opportunity for training in beam and night flying as the two preliminary flights on May 15th to Walla Walla and Pasco, and two similar flights on May 23rd to Yakima and Wenatchee will be over the beam network at night connecting the four points. At each field scores of Legionnaires are scheduled to be present with memberships rounded up in their respective districts.

Details for the flight were worked out by Lieuts. Hillford R. Wallace and Ellsworth C. French. The former is commander of the 116th Photo Section and Chairman of the Legion's State Aviation Committee, while the latter is Commander of the Eighth Legion District. On May 31st, the two officers will make a flight into Western Washington, visiting Vancouver, Kelso, Chehalis, Tacoma, Bellingham, Arlington V-6787, A.C.

and Seattle for the purpose of gathering up final memberships. At Boeing Field, Seattle, State Legion officials will meet the plane and take over all memberships secured.

It is the hope of the Division Aviation that new radio equipment, scheduled to have arrived April 1st, will be available for the annual encampment at Fort Lewis, Wash., beginning June 11th. Major Robin A. Day, Instructor, received word from the New York Army Depot that four SCR AA-185 receiving and transmitting sets are to be shipped soon. They will replace the present SCR-134 type.

Lieut. E.J. Corigan, 116th Obs. Sqdn., just returned from an extended flight which took him to St. Paul, Chicago, Nashville, Los Angeles and Spokane. Other recent flights included Capt. Claude Owen to San Diego and return; Capt. L.C. Sherman to St. Paul; Capt. Wm. Foster and Robert Owen to Boise, Idaho, and Capt. Owen and John Walters to Portland and Seattle.

Major Robin A. Day flew to the Rockwell Air Depot, ferrying an O-38B for overhaul.

Spirits are high with the 41st Division Aviation as a result of the recent inspection made by Major-General Paul B. Malone, 9th Corps Area Commander. The Adjutant General of the Corps Area in an official communication to Adjutant General Maurice Thompson, gave the rating of "Superior" to Police and appearance; "Excellent" to Unit and Individual appearance, readiness for field service, storage and warehousing, "Very Good" to appearance, officers, and "Good" to garage and motor transportation. General Thompson, in his endorsement of this communication to Major Day, wrote: "The ratings accorded your organization by the Corps Commander on the occasion of his recent inspection, indicates a highly commendable degree of efficiency in training and administration."

Barksdale Field, La., May 9th.

A demonstration was given on April 27th for the students of the Command and General Staff School at Fort Leavenworth, Kans., by the 3rd Attack Group. This demonstration included the dropping of live bombs and firing of machine guns at ground targets, as well as a showing of the new type parachute bomb.

All P-12 airplanes now assigned to the 20th Pursuit Group are being held in readiness for immediate delivery on anticipated transfer. They are to be replaced by P-26 type planes. When all units are uniformly equipped, field exercises and maneuvers will be greatly simplified. At present, those squadrons equipped with the P-12's are unable to keep up with the P-26's. All A-8's have been ordered transferred to Langley Field. It is understood that they are to be used as initial equipment for the new Attack Squadron at that station, and undoubtedly represent "stop-gap" equipment.

The P-26 airplanes now on hand are being equipped with flaps by the Boeing factory at

Seattle, Wash. Ten are now at the factory, and three more are being ferried to replace those now ready for delivery.

As soon as an O-19 airplane, equipped with the necessary instruments, is delivered to this station, daily high altitude missions are to be flown for the purpose of obtaining meteorological data for the Weather Bureau.

LIBRARY NOTES

Some of the More Interesting Books
and Documents

Recently added to the Air Corps Library

A 10.01, U.S. 2. Statistics of civil aeronautics, 1926-1933, by Great Britain, Air Ministry, 1935, 7p. Extracted from Aeronautics Bulletin No. 1, published by U.S. Department of Commerce.

A 40/70. A Climatological review of the Alaska-Yukon Plateau, by Major Grow, 1935, 13p.

B 63/25. The influence of acceleration upon the human organism, June 1934. Tr. B-8601. 6p. Maneuverability of contemporary Pursuit planes is no longer limited to technical conditions of stability of the airplane but by the accelerations which can be borne by human organism.

D 11.323/3. The Story of Helium, by Gilbert Grosvenor, 1935, 4p.

D 13.49/5. Army Air Corps Radio Blind Landing System adopted as standard by Bureau of Air Commerce, Department of Commerce, 1934. 5p.

D 72.2/2. Airplane Cannon, by Colonel Blumer, April 13, 1935, 14p. Tr. B-8524. Brief history of the use of the cannon on the airplane.

383.1/D28. The Economics of Air Mail Transportation, by P.T. David, 1934, 235p. Underlying causes of the air mail controversy are disclosed in this volume, which gives the history of air mail transportation and the net deficit incurred by the government in connection with the air mail.

629.18/H 32. Aircraft performance testing, by S. Scott Hall and T.H. England, 1933, 206p. Written primarily for the constructor who wishes to put his aircraft through an adequate program of tests on modern lines.

919.9/H 32. The Conquest of the South Pole Antarctic Exploration 1906-1931, by J. Gordon Hayes, 1935, 318p. Record of noble endeavor or hardships bravely borne and of almost incredible adventure.

940.414/G 58. The Russian Army in the World War, by Nikolai Nikolaevich, 1931, 287p. Complete and exhaustive account of the terrible losses suffered by Russia during the war.

---oOo---

Master Sergeant James A. Lee, Airplane Pilot, on duty with the Air Corps Detachment, Aberdeen Proving Ground, Maryland, accepted appointment as a Warrant Officer, United States Army, on May 10, 1935, and the resulting vacancy in the grade of Master Sergeant, Air Corps, was filled by the promotion of 1st Sgt. George Sproesser, Langley Field, Va., May 10, 1935.



TECHNICAL INFORMATION

ENGINEERING AND NEWS

AIR CORPS MATERIEL DIVISION



Altitude Computation.

An extremely important factor in carrying out instrument flying missions and instrument landings is the standardized use of altimeter equipment. The Air Corps Type C-5 sensitive altimeter is practically in universal use in the Air Corps and, within the last year, has been supplemented by the Type H-1 station altimeter for obtaining the necessary data at the ground for transmittal to airplanes in flight. The data obtained from the station altimeter and the method of using these data has been standardized in two systems, either of which may be used with the same equipment at the will of the pilot. System I is for use in instrument landing and provides an indication of zero altitude when the airplane arrives on the runway. System II is for use on long flights where it is necessary to cross mountain ranges, etc., and permits the altimeter indication to be compared with the elevation recorded on strip maps. For most accurate results, the Type C-1 altitude computer is required. Further detail on the equipment of standardized procedure may be found in Technical Order 05-30-1.

Air Corps Tests of Protective Coatings.

The development and testing of protective coatings for airplanes is one of the functions of Wright Field. The manufacturers of these products have been intensively developing the field of synthetic lacquers and enamels manufactured from resins unknown up to a few years ago. These products are definitely superior with regard to water resistance, durability and working properties, but, as in the case of other materials, many of them are marketed without adequate tests and the consuming public is used as the laboratory. In order to be certain that the Air Corps will not be holding the bag, complete laboratory tests are made at Wright Field laboratories and these are supplemented by exposure tests on racks installed at Chapman Field, Miami, Florida. The installation at Chapman Field consists of a land rack at 45° facing south, and a tidewater rack so located that the test panels are immersed during high tides. The results of the Chapman Field exposure tests indicate that the conditions are more severe than those encountered at any Air Corps station, with the possible exception of France Field. Enamel finishes with a durability of from six to nine months

at Dayton, Ohio, fail within one month on the tidewater rack. Any finish used by an Air Corps Contractor must meet a six-months' test at Chapman Field before it is approved for use.

Automatic Pilot

A representative of the Sperry Gyroscope Co., Brooklyn, N.Y., arrived at the Materiel Division recently to assist with the first automatic pilot installation being made in a Type YB-12 Martin Bomber. He will remain at the Division until the installation is completed and assist with the necessary adjustments during flight tests.

External Energizer.

A self-adjusting external energizer has been submitted for test by the Eclipse Aviation Corporation, East Orange, N.J. The object of this unit is to eliminate the shock loading of the starter gears, and it is designed with a low torque setting, approximately 20 ft./lbs., at the time of engagement with the starter hand crank. This torque is increased in proportion to the speed at which the hand crank is turned, until the clutch reaches a normal setting of approximately 80 ft./lbs. It requires 25 seconds to bring the standard Air Corps starter flywheel from 0 to 12,000 r.p.m. 500 starts have been made with this energizer without the clutch setting being materially changed.

Portable Liquid-Oxygen Generator

The portable liquid-oxygen generator was delivered to Chanute Field, Rantoul, Ill., on March 30th, by Materiel Division personnel, and instructions in its operation and maintenance were given at that station from April 1 to 5. The unit is to remain at Chanute Field indefinitely for instruction purposes.

45-inch Wheels for New B-10 airplanes.

The Martin B-10B airplanes will be equipped with 45-inch streamline wheels which will give considerably better service than the 40-inch wheels on the YB-10 and YB-12 type airplanes. The 45-inch wheel will have larger brakes with scoring resistant drums which should materially decrease the maintenance on this equipment. The larger rolling radius and footprint of the 45-inch wheel and tire should enable the B-10B airplanes to operate on much softer ground than is possible with the YB-10 type.

INSPECTION DIVISION, OFFICE OF CHIEF OF AIR CORPS

The following difficulty was reported in recent Unsatisfactory Report:

Vest, Life Preserver, Type B-2, (yellow).

1. The actuating valve and manifold assembly of Vest, Life Preserver, type B-2 (yellow) failed to inflate vest properly by inflating one cell only. There has been two such failures during tests and one during emergency jump at this station. It is believed the failure of the type B-2 vest used by Lieut. Anderson, December 14, 1934, in San Francisco Bay when only one cell was inflated was caused by the equalizing valve sticking.

2. During test, the failure of the vests to inflate properly was caused by the rubber part of the equalizing valve becoming stuck to the valve seat. Then one valve would open and all the gas enter one cell only.

3. The Type B-2 vest has been in use at this station since September 10, 1934.

4. A monthly check has been made for the past three months of the type B-2 vest by using adapter (A) attached to the air line (B) which has 120 pounds pressure, by pushing push button (C) momentarily, then note the even distribution of air in gas cells. When valves show failure by this test, CO₂ bottle Specification No. 40227 is used to test as directed in Technical Order 13-1-3, Paragraph 5, which so far has shown same as previous test. Valves that failed have been pried loose, reinstalled and tested satisfactorily afterwards.

5. It is recommended that a more positive distribution valves be used or separate cylinder be installed for each cell.

6. The vests have been repaired as prescribed in Paragraph 4 and put back in service.

7. Photograph of adapter attached.

8. No previous Unsatisfactory Reports have been submitted by this station on this condition.

Reply to UR:

"In this connection, it is realized that the present standard pneumatic life preserver vests have not proven entirely satisfactory. A constant study has been made of this type of equipment from the time the first experimental design was employed. As a result of this study, there has been developed a new design, Type B-3. It is believed the undesirable features experienced with the old type vest have been corrected in the new type vest. The Type B-3 vest has an individual inflation system for each chamber. Small commercial CO₂ cylinders, now available, will be used instead of the present cylinder. This cylinder is believed to be more fool-proof and less complicated from a standpoint of maintenance and inspection.

There is now a quantity of the new designed equipment on procurement for service test. Several vests will be furnished Crissy Field as soon as they become available. Upon receipt of satisfactory service test reports, the article will be standardized for procure-

ment and issue to the service activities.

It is impracticable to rework the Type B-2 vest. The only solution for the present difficulties is more frequent inspection and tests as prescribed in existing technical orders."

The following difficulty has been reported in recent Unsatisfactory Report:

Airplane Type P-26A:

Strut Assemblies, Oleo, Left and Right, Parts No. 8-538-5 and 8-538-6.

1. Strut Assemblies, Oleo, Left and Right, stuck in the retracted position thereby losing all shock absorbing qualities.

2. The airplane has just returned from an extended cross-country trip on which the Oleo struts were not cleaned. It is believed the defect was caused by dust and dirt accumulating in the cylinder and around the packing nut.

3. Recommend these struts be disassembled and given a thorough inspection.

Note by Station Engineer Officer: Strut assemblies were disassembled and inspected and found to be in good condition. The airplane mechanic who removed these struts from the airplane reported that they were very difficult to remove as they were practically frozen at the top fitting due to the bolts being excessively tight. It is believed that this is accounted for the shocks malfunctioning.

Reply to UR:

Drawings show the bolt and hole tolerances to be satisfactory and since no previous trouble of this nature has been encountered, it is the opinion that the difficulty is either due to an excessively tight fit of the bolt by the manufacturer or to faulty lubrication. It is requested that the bolts in question be relieved a slight amount by dressing the attaching holes in the oleo upper terminal fitting if examination shows this action to be necessary in order to provide for proper functioning.

Airplane Keystone B-3A.

EXTINGUISHER FFR-TYPE (ONE QUART CAPACITY).

This fire extinguisher, mounted on the control column, failed to perform satisfactorily when required for use on smoldering electric wiring back of the instrument board. Pump action failed to provide a stream of sufficient force.

The inspection tag was lost at this time, but it is reasonable to believe that the extinguisher was properly tested as required by Technical Order 01-1-82 since the tag was installed when past inspections were made.

In order to assure proper functioning of these extinguishers, while in service, it is suggested that several strokes of the handle be made when liquid must be added. It is believed that a test once a year is insufficient.

Airplanes, Type P-26A:

FAULTY DESIGN.

Fairing Installation, Landing Gear, LH

V-6787, A.C.

Fairing Installation, Landing Gear, FH
Parts No. 15-2785 and 15-2785-1.

Numerous cases of cracked and bent cowl formers of the landing gear fairing assembly are noted, especially on airplanes returning from cross-country trips.

Caused by pilots and mechanics using this fairing as a step while starting the airplane, servicing and performing maintenance work.

Recommend the construction of this fairing be redesigned to allow personnel to use same as a step to facilitate maintenance and starting or a step be incorporated with the fairing installation to accomplish the same purpose.

Carburetor Assembly, Type NA-Y8C, A.C. No. 5462816

When the airplane was started the motor loaded up. With motor stopped, working of the wobble pump allowed excessive flow of gasoline through the drain pipe. Upon removal of the carburetor visual inspection showed that the needle valve seat was sheared off, allowing the float to become stuck in a down position.

Parachute Flare, Type M-8.

M-8 parachute flare, part No. AC drawing SK-18158, ignited upon contact with ground when F-12D airplane No. 31-212 ground looped at Spartanburg, S.C., on March 9, 1935.

Flare burned inside container, setting fire to the wing and burning both wings and fabric on fuselage.

These racks were located below the wing at distance of 84" from the center of the fuselage.

Burned flare and rack and flare from opposite wing being forwarded as exhibits under separate cover.

Recommend that flares suspended below the wings on F-12 airplanes be suspended closer to the fuselage.

Reply to UR:

"The recommendation contained in this report to the effect that flares suspended below the wings of Model F-12 airplanes be installed closer to the fuselage cannot be concurred in. The present installation drawing locates the flares on Model F-12 airplanes 84 inches from the center line of the airplane. The locating of the racks closer than this is not feasible, due to the resulting possibility of interference between the flare and tail surfaces of the airplane at time of release."

Slipping Clutch SR-1340-E Engine No. 32-159.

Approximately 40 minutes out of Jacksonville, Fla., this engine began missing and back-firing. The pilot, believing there was water in the gasoline, returned to Daytona Beach, landed, and drained about four gallons of gasoline from the Auxiliary tank. The engine then functioned satisfactorily for approximately 20 minutes out of Daytona Beach, and began missing and back-firing again. He returned to Daytona Beach and remained until a mechanic's services were obtained. The mechanic made a complete inspection and changed the spark plugs. The airplane then proceeded to Municipal Airport at Miami, Fla., where an in-

spection was made by the Engineering Officer from Langley Field, resulting in the belief the blower clutch was slipping, therefore necessitating an engine change. The airplane was then flown from the Municipal Airport to Chapman Field, and the engine was reported to have run satisfactorily except for being slightly rough.

Reply to UR:

The Fairfield Depot reports that during inspection of the subject engine they found that the clutch showed evidence of slipping. Piston No. 2509 installed in No. 1 cylinder was cracked. This permitted some "blowby" which scored the cylinder. The scored cylinder will require regrinding for oversize piston. They also found that the rear propeller hub cone was loose, working on the crankshaft, and had galled the rear cone seat.

The Fairfield Depot is of the opinion that the foregoing conditions would cause a rough engine. The clutch slipping would give the impression of a clogged or dirty gasoline line or strainer. The piston failure is similar to others reported to the Division on the cast type of piston. All pistons procured in the future will be of the forged type. The trouble experienced with galling of the crankshaft may have been due to the improper tightening of the propeller hub retaining nut.

Martin B-10. Ramac fuel pump, #10316MA, developed an excessive amount of corrosion around the base, necessitating its removal. The base around the drive shaft was badly corroded and the drain from the packing gland almost closed by corrosion.

Reply to UR:

"The excessive corrosion of the type F-6 fuel pump assembly No. R-1561-D in B-10 airplane was believed due to the greater corrosion tendencies of the magnesium base alloys when in contact with salt charged atmospheres such as prevail along the sea coasts.

Twenty-five type F-6 Ramac fuel pump assemblies were fabricated from magnesium alloy to determine whether this light metal might be used for fuel system parts. The castings were treated for resistance against corrosion by a chromate acid process. Pump assemblies with the letters M.A. following the manufacturer's serial number have the bodies and mounting plates of magnesium alloy. The pump assembly referred to in this report is of the light magnesium base alloy. The excessive corrosion appears to have developed due to the lack of adequate corrosion resistant treatment. If reports of similar difficulties are reported, steps will be taken to remove these pump assemblies from service. It is requested that the pump assembly in question be forwarded to this Division marked for the attention of the Field Service Section for examination and further disposition."

Re 34B2948 Glass, photographic lamp diffusing (type B-2).

Transmits an excessive amount of light thru

the center of the glass where there is a spot, which causes an over exposed spot on each print.

Six each of these glasses were received from the Materiel Division on March 15, 1935.

A thorough test has been made by this organization of the above glass with the B-2 lamp used at various distances and angles from the printer. Also with two of the glasses used simultaneously as suggested in radio-gram, Wright Field, April 2, 1935. Attempts were also made to improve diffusing qualities by the application of ground glass substitute and colored inks. All efforts to date with the above glass proved unsatisfactory.

By boiling Opal glass, and allowing it to cool slowly its heat resisting qualities have been improved to a satisfactory point. A sheet of Opal glass has been giving good results for the past three days.

It is recommended that a more suitable glass, with at least the qualities of Opal glass as regards diffusion, be furnished.

Reply to U.R.:

"It may be necessary to reduce the intensity of the illumination of the type B-2 photographic lamp by cutting out some of the current, which is accomplished by throwing the switches provided for this purpose and which are located on the back of the lamp assembly.

It is also believed that the difficulty referred to can be overcome by using ordinary chalk for spotting the diffusing glass in the center to prevent an excessive amount of light coming thru and reaching the negative.

It will also be necessary to apply this chalk on both sides of the glass circle, that is, on the one side that has the sand blasted surface and on the other side that is sand blasted over the entire surface.

Further comments are requested on the results obtained by complying with the above recommendations."

Tube - Conduit P-26A, Part No. 15-2810-51, 52, 53.

The time necessary to change engines of P-26A airplanes is increased through the failure of conduit tubing, part No. 15-2810-51 (L.H. Solenoid box to R.H. Solenoid box); 15-2810-52 (L.H. Solenoid box to R.H. Magneto); and 15-2810-53 (L.H. Solenoid box to L. Magneto). In addition, these tubes are frequently badly bent or broken when it is necessary to work on the gun synchronizer solenoids.

In order that maintenance time may be decreased and the frequent replacing of these parts be obviated, it is recommended that the aluminum tubes be replaced by flexible tubing or by copper braid. Recommend that copper braid soldered to nipples of the same O.D. as the tubing now used be adopted. The copper nipples to be used so that the present box tube clamps may be utilized.

The subject conduit tubes must be moved or removed entirely when changing engines, working on the solenoids and when changing starters.

Reply to U.R.:

"To correct these conditions flexible conduit is being procured to replace certain sections of the rigid conduit. When the flexible conduit becomes available, instructions will be issued to have same installed at overhaul of the airplanes.

As a temporary remedy, request the present tubing, if practicable, at points where failures are occurring be wrapped with thin sheet metal and taped. It is believed that certain of the tubes will give better service if supported so as to eliminate some of the strain on the conduit fitting.

Regarding your recommendation that copper braid soldered to the nipples be used, this is not recommended as it would be practically worthless as a radio shielding."

Support Assembly, Blast Tube, Part No. 21-4328.

Blast tube support assembly removed from P-26A airplane, Air Corps No. 33-120. Blast tube had been installed for about 10:00 at the time of failure. The gun to which the blast tube was assembled did not fire over 20 rounds at the last quarterly test.

Reply to U.R.:

"Other failures of this part have occurred and Drawing 21-4328 has been changed requiring that the threaded portion of the fitting be made from nickel steel. In addition, Technical Order 01-20D-8 requires the blast tube to be rigidly attached to the gun barrel in a manner practically the same as recommended in your reports. This Technical Order requires that the blast tube change be made at overhaul of the airplanes. If this change is considered necessary prior to overhaul, request it be made."

Junction Box, Type TM-AD-167.

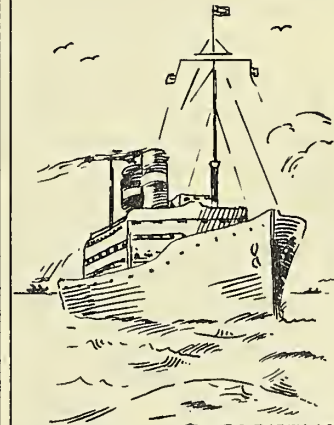
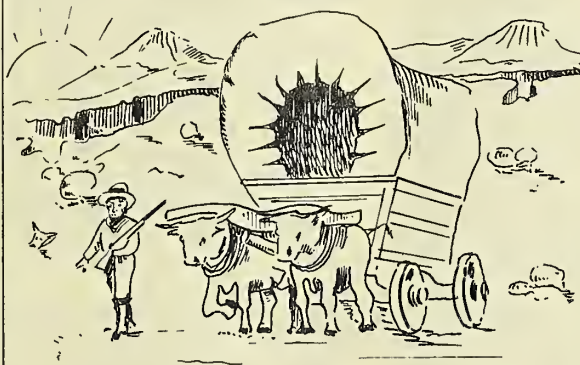
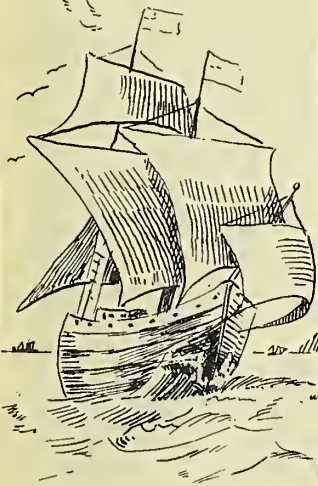
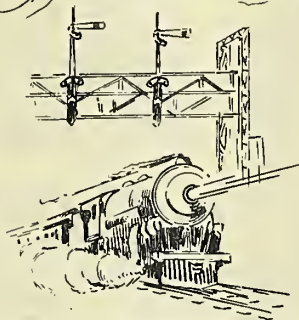
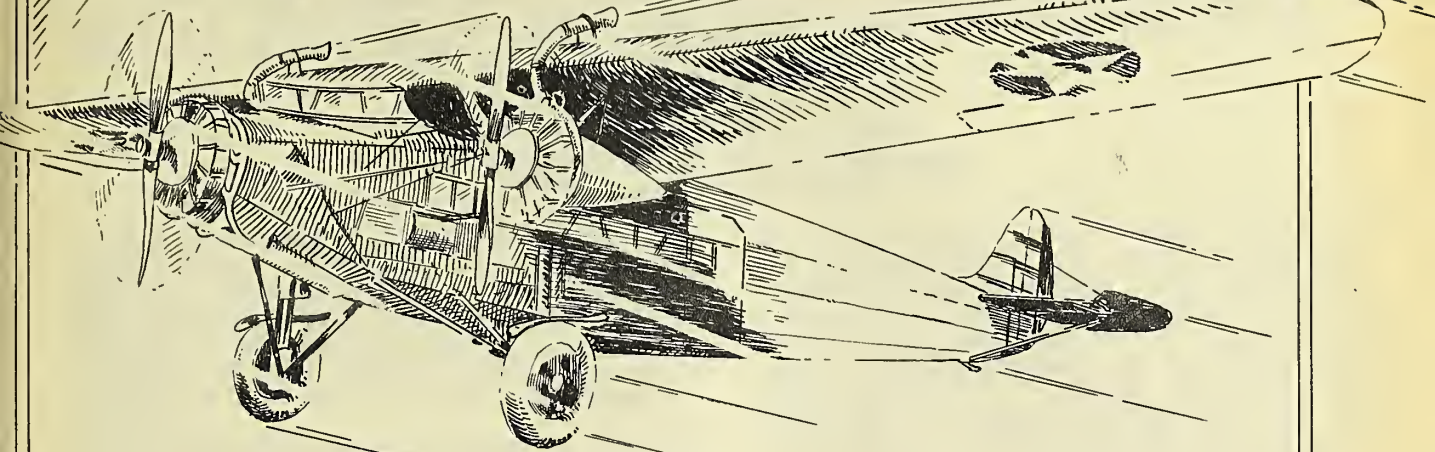
1. Relay, Part No. 225-N, in Junction Box, Type TM-AD-167, for use with type SCR-183 radio sets.

2. The bearing cups on the relay cone, into which the bearing pins of the relay armature fit, have worn to such an extent that the armature sticks in both open and closed positions. The excessive play in the armature has also caused it to come in contact with high voltage connector nearest the armature. This short circuit caused both the relay armature and the high voltage connector to be burned considerably. This specific failure has occurred on two separate junction boxes.

3. This equipment was received new from the Signal Corps and has not been overhauled. This equipment has had approximately 150 hours of service.

4. The cause of the unsatisfactory condition is undetermined.

AIR CORPS



F.C. BARRY-A.C.

NEWS LETTER

ISSUED BY
OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON
JUNE 1, 1935

Information Division
Air Corps

June 1, 1935

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

MY VISIT TO THE AIR CORPS

By Major-General Geo. S. Simonds
Deputy Chief of Staff

Upon assuming my present duties as Deputy Chief of Staff, I determined that my first official visit from General Headquarters to units and establishments of the Army should include elements of the newly organized G.H.Q. Air Force and some of the Air Corps Schools.

In my preliminary talks with General Andrews, he made clear his conviction that immediately upon setting up his Headquarters he should enter upon a determination of and solution of his organizational problems, a stock taking of what he had to do and what he had to do it with, leading up and into the preparation and execution of plans for the administration, equipment and training of this new and vitally important major unit of our field forces of which he had been placed in command.

It appeared to me that his grasp of the fundamentals of the problem was eminently sound. It was realized, of course, that it would take time to make of it a completely going concern, but it was considered extremely important and desirable that the higher command should obtain a first-hand knowledge in the early stages of the steps being initiated for the solution of the problem. This, therefore, was one of the important reasons for the instructions given me in the latter part of March by the Chief of Staff for a tour of inspection - by plane - lasting about two weeks and covering the South Atlantic States and the Gulf States as far west as El Paso.

I was also extremely desirous of learning something more than my very sketchy knowledge of the Air Corps part of our Army school system. In the years of my service, I have had much to do in the development of our Army educational system, but had no first-hand knowledge of the Special Service Schools of the Air Corps. It was therefore with much enthusiasm and anticipation that I welcomed this opportunity.

Although I visited other military establishments and troops, including elements of the 2nd Infantry Division at Sam Houston, of the First Cavalry Division at Fort Bliss, and various Civilian Conservation Corps installations, it is with my visit to the Air Corps that this contribution to your publication is concerned.

At Langley Field, I was honored with a review of the air units stationed there, inspected the more important installations at the station and, above all, had presented to me most clearly and comprehensively by the officers of the Air Force, Station, and Wing Headquarters, their problems and how they were going about the solution thereof.

My stay at Barksdale Field was short, but in a few hours' time my old friend, Gerald Brant, showed me his post and gave me much information on the Third Wing.

In a half day at Randolph Field, Colonel Harms (whose entry into the service was closely and energetically supervised by me in March, 1908), with his Staff and Faculty, showed me the post and gave me a most interesting and enlightening exposition of the organization and operation of the school. I do not believe it would be possible to give a more understandable and comprehensive presentation of a set-up than was given to me on that day. It was with much regret that other duties prevented me from making more of a visit with Colonel Fickel at Kelly Field, and it is my purpose to do so at the first opportunity.

It was at the Air Corps Tactical School at Maxwell Field that I made a more extended visit than at any place on my trip. To anyone who stops to think, the development of tactics with the machines and weapons which have been progressing and changing so rapidly since the War, as have those pertaining to the Air Corps, must present a difficult and even a baffling problem. Again, I found in command another friend of long standing - another whom I helped to raise - Colonel Curry. This time, however, he was telling me. With much patience, clarity and conviction, he and his assistants set forth their mission, how they were organized for it, and what they were doing to carry it out. He also with evident pride took me on a tour of inspection of this fine new post, which has been largely brought into being during his tour of duty there.

Now for a few brief and general impressions. The General Headquarters Air Force has entered into what frankly must be recognized as an experimental period. The problems are many, new

V-6796, A.C.

and complex. I am convinced that General Andrews and his staff are going about this by common sense methods. They are taking up first the things that ought to come first. I know that they are putting out with the very best that is in them to make our Air Force an effective fighting unit, just as our Four Army Commanders are striving to do with their units.

I want to say to you in this rather intimate discourse that those of us in positions of high command and responsibility in the National Defense are firm in our conviction that whatever may be the future developments in machines, weapons, organization and tactics, this step is bound to be one in the right direction. I personally feel that in the stage of development in which we find ourselves at the present moment, a step in any other direction may be compared to stepping off a precipice in order to take the shortest line, whereas by developing a road as we go along, we are more sure of reaching the proper destination.

As to the schools - and now I am on familiar ground - the organization and methods of instruction are in accord with the principles which have made the United States Army educational system the envy of military authorities the world over. The school plants and the new Air Corps posts, as well as the new posts of other arms, are splendid. They represent years of devoted effort on the part of those who have been and are in responsible positions in the War Department, and of those leaders in the other Executive and in the Legislative Departments of the Government who have given heed to the deplorable conditions that existed prior to the new building program. I have no patience with those who may say that such living conditions will make our Army soft. They are, for the officers and soldiers, simply in accord with what are or ought to be American standards of peace time living, and it is to be hoped that proper housing conditions will be extended to the whole Army; also that those in high command are going to be able to give sufficient field training to keep us hard - and I know that if the test of war comes the American soldier will meet it with the same hardihood as always.

One of the happy features of my services in the Army is that now after many years, particularly in various campaigns and in the schools, I have a wide knowledge of and acquaintance with officers - my seniors, my contemporaries and my juniors. Officers of the Air Corps who are now coming to positions of high command and responsibility were trained by me at West Point and elsewhere. I know they would think I am slipping if I did not have a few "skins."

Here they are. In the Air Corps, as well as in other arms, there are some whose enthusiasms run ahead of accomplishments possible for them or anyone else. (As far as I am concerned, I would rather be trying to control and direct enthusiasm than struggling to overcome hidebound inertia.) But let's temper our enthusiasms with realism.

In the Air Corps, as well as in other arms, there are some who magnify difficulties and have a wrong perspective. There are undoubtedly deficiencies in training. My own opinion is that the Air Corps is within itself endeavoring to overcome them with all the means at its disposal. There are undoubtedly some deficiencies in personnel but, even in that, superior quality will go a long way to overcome lack in quantity.

At the present moment, lack of equipment is, in my opinion, the most serious deficiency confronting the Air Corps. That is something that the highest authority must solve along with the other great problems of financing all the pressing problems of government. In the meantime, higher authority has a right to expect of us complete loyalty and honest effort to make the most efficient use of the facilities we have.

I can't wind this up without referring to the great trip I had by plane - pilot, Captain Hez McClellan - mechanics, Technical Sergeant Roy Hooe and Corporal Lewis Krauss. It was probably all in the day's work with them - as it should be - but I just want to say that it's up to all of us to do our day's work as they do.

In case any of the real heads of families who extended me so many delightful hospitalities should read this, I would like them to know that I have made the record in my book of happy memories.

---oOo---

GENERAL CHANEY ASSUMES NEW DUTIES

Brigadier-General James E. Chaney, Assistant Chief of the Air Corps, reported at Randolph Field on May 17th and assumed command of the Air Corps Training Center. Other than a reception at the Officers' Club and a few private receptions, the arrival of the new Commanding General was heralded only by his appearance at his desk. He requested no ceremony or display of planes to celebrate his taking over command. With Mrs. Chaney he arrived after a motor tour from Washington, where he had been serving in the Office of the Chief of the Air Corps. Enroute, he visited Langley Field, Miami, Fla., Pensacola, Fla., and New Orleans.

General Chaney relieves Colonel Jacob E. Fickel, Commandant of the Advanced Flying School, Kelly Field, who has been in temporary command of the Training Center since the departure for duty in Washington of Lieut.-Colonel Henry B. Claggett, Air Corps.

FIELD EXERCISES BY 91st OBS. SQUADRON

Close liaison and cooperation with the Sixth Brigade, encamped near Monterey, Calif., with highly successful results, marked the two weeks' field exercises recently conducted by the 91st Observation Squadron, Crissy Field, with the 15th Photo Section attached. The base of operations was at Watsonville Airport, Watsonville, Calif.

During this period, Observation, Attack and Bombardment and towing missions were flown by the Observation pilots and observers. The annual tactical inspection by Major-General Paul B. Malone, Commanding General, 9th Corps Area, was particularly interesting, in that it was conducted in connection with the performance of actual missions with ground troops.

Major Floyd E. Galloway, Commander of the 91st Observation Squadron and Brigade Air Officer, made the summation of "One hundred percent" and was joined by very favorable comment from General Malone and Brigadier-General P. Whitworth, Commanding General of the Sixth Brigade.

---oCo---

PURSUITERS PARTICIPATE IN SILVER JUBILEE

The First Pursuit Group, Selfridge Field, Mich., under the command of Lt.-Colonel Ralph Royce, departed at 1:30 p.m., May 4th for Brantford, Ontario, where the 19 P-26A airplanes and one C-24 Transport remained until 3:00 p.m., May 6th, for the purpose of participating in the demonstrations held at that place in honor of King Edward of England.

This Good-Will flight was ordered by the War Department at the request of the State Department.

---oCo---

PURSUIT PLANES FERRIED TO WEST COAST

Twenty officers from Langley Field, Va., ferried P-12C airplanes to March Field, Calif. On the return flight, these pilots ferried P-26 planes to Barksdale and Selfridge Fields and P-12F planes to Langley Field. Those who participated in this round trip transcontinental flight in Pursuit airplanes were Majors Newton Longfellow, C.V. Haynes, Captains E.R. Todd, W.R. Wolfenbarger, R.A. Wilson, E.E. Travis, A.R. Springer, B.J. Peaslee, W.C. Bentley, H.W. Dorr, C.G. Goodrich, A.L. Harvey, T.S. Power, 1st Lieuts. R.A. Grussendorf, B.E. Nelson, S.O. Ross, O.S. Picher, T.C. Darcy, 2nd Lieuts. R.L. Wassell and B.S. Harrell.

On his way to the West Coast, Captain Goodrich was forced down near Mescal, Arizona, by engine failure. His airplane was totally wrecked, but he escaped injury. A March Field airplane ferried him to that station, and he subsequently continued his ferry mission to Barksdale Field.

AIR COURSE FOR GROUND OFFICERS

There is now being conducted at the Air Corps Tactical School at Maxwell Field, Montgomery, Ala., a special two weeks' course on various Air Corps subjects for Corps Area ground officers. The course is under the direction of Lt.-Colonel Harold L. George, Air Corps, and consists of a series of lectures and illustrative problems by the various instructors of the Tactical School. Officers were ordered to Maxwell Field from the various Army posts in the 4th Corps Area for the period of the course.

In addition to the theoretical courses taught, these officers will be given familiarization flights in Bombers and in bi-place planes, and will be permitted to make short night flights and cross-country training flights as passengers.

The following officers at Maxwell Field are serving as instructors for this course:

Lt.-Colonel Harold L. George and Capt. Robert M. Webster - Air Force Course.
Major Odas Moon - Bombardment Course.
Majors Claire L. Chennault and Warren R. Carter - Pursuit Course.
Major Frederick W. Evans, Observation Course.

Major Austin W. Martenstein - Air Logistics Course.

Colonel William N. Porter, C.W.S. - Chemical Warfare Course.

Captain Gordon P. Saville - Air Intelligence Course.

Major Melvin B. Asp - Engineering and Inspection.

1st Lieut. Milton T. Hankins - Meteorological Course.

Officers ordered to attend the course, which started on May 23rd, include:

Lt.-Colonel Cary I. Crockett and 2nd Lieut. George T. Duncan, 22nd Infantry; Major Charles M. Busbee, 36th Field Artillery; 1st Lieut. John M. Works, 1st Observation Battalion; Captains Charles S. Johnson, Levie W. Foy, William M. Hutson and William D. Schas, 8th Infantry; Captains William R. Hamby and George R. McElroy, 6th Cavalry.

The opening exercise for the class was held at 9:00 a.m., May 23rd, with the Commandant of the School, Colonel John F. Curry, as instructor. Each day of the two weeks' course will be filled with lectures and problems from 9:00 a.m. until 3:00 p.m., and students will be afforded the opportunity of securing flying in addition to the regular schedule.

---oCo---

Captain George W. Goddard, Air Corps, who conducts the Aerial Photographic School at the Air Corps Technical School at Chanute Field, Ill., recently flew to the United States Military Academy, where he spent two days, during the course of which he delivered lectures to the West Point Cadets on the subject of Aerial Photography.

V-6796, A.C.

BOMBING TESTS CONDUCTED IN HAWAII

The 18th Composite Wing conducted a test of live demolition bombs at Bellows Field, Waimanalo, on May 3rd last. For some time periodic tests of live bombs from the current Reserve in the Hawaiian Department have been pending. Shortly after the arrival of the new Department Commander, Major-General Hugh A. Drum, Colonel Emmons, Commander of the 18th Composite Wing, conceived a plan of combining this test with the demonstration of Air Corps bombing and attack tactics. This plan proved to be opportune, since General Drum is in the process of completing his tactical inspection of various military organizations in the Hawaiian Department.

A number of difficult situations presented themselves, not the least of which was the location and laying out of targets, both from point of view of the military personnel participating in the demonstration and the spectators. It was finally decided to hold these tests on the Waimanalo Military Reservation. This reservation afforded enough area for dropping bombs and provided also an unusual observation point for spectators, a ridge of hills along the north edge. Since the slopes of these hills are very steep, it was necessary to break trails and in some instances construct steps and hand rails to the observation point which was cleared to accommodate between 300 and 400 persons. Being at an altitude of several hundred feet, this point afforded the spectators a splendid view of the bombing and attack demonstrations.

A Provisional Bombardment Squadron was organized at Luke Field and placed under the command of Major John V. Hart, Air Corps. Other personnel of this Squadron were Captains Reginald Heber, Ford J. Lauer, Lieuts. Emery S. Wetzel, William L. Kennedy, Jack W. Wood, Louis A. Guenther, William L. Travis, Harry G. Montgomery, Jr., Joseph J. Ladd, James W. Gurr, Clifford H. Rees, Charles H. Pottenger, Travis M. Hetherington and John J. Hutchison.

It being the desire of the Wing Commander to conduct bombing from as high an altitude as practicable, a number of Mark XV synchronous bomb sights were procured for this particular project, and for a period of ten days the Provisional Bombardment Squadron carried out extensive bombardment practice between 5,000 and 12,000 feet altitude.

Bombardment targets were arranged to fulfill the requirements of the ordnance test and to provide a series of aiming points, whereby the craters caused by the bombs dropped would be sufficiently separated to enable identification. Three aiming points were established, each consisting of three old bomber wings staked to the ground. The target area was outlined by flags for the benefit of the observers and spectators. An

aiming point for each mission was identified by means of a red flag.

Attack targets were of two types; silhouettes, representing troops and a line of square cloth-covered frames representing a truck train.

Operations were directed from a CP set-up overlooking the entire range. Telephone communication was provided between the CP and Luke Field; CP and Radio Station at Bellows Field and CP and Observation Point. Radio communication was had between the Radio Station at Bellows Field, Luke Field and airplanes in flight.

When airplanes reached their bombing altitude, radio communication was established with Bellows Field on short wave and instructions for bombing were given. Shortly before each phase of demonstration, an announcement was phoned to the Observation Point for the information of the spectators.

Perfect weather favored the entire demonstration. The first mission consisted of dropping four 600-lb. demolition bombs and took place promptly on schedule. All bombs went off with a high order of detonation and made a very impressive display for the beginning of the program. The second mission consisted of dropping six 300-lb. demolition bombs and a high order of accuracy resulted. Next followed a demonstration of attack aviation by the 26th Attack Squadron, Wheeler Field, commanded by Major S.D. Frierson. Aerial machine gunnery against silhouette targets was demonstrated. Just as the last of the 300-lb. bombs was dropped, the Attack took off from Bellows Field, where they had been stationed for the day, and formed very rapidly, disappearing momentarily behind the volcanic peaks to the West. Suddenly they reappeared and dove to the attack on the targets. These attacks were made by flights of three airplanes each, and were repeated by single airplanes, 80% hits being recorded.

The Bombardment again took the air, and one 300-lb. and seven 100-lb. bombs were dropped. This was immediately followed by a demonstration by the 6th Pursuit Squadron, Wheeler Field, commanded by Major Early E.W. Duncan. Aerial machine gunnery and bombing were demonstrated against the silhouette and truck train targets. The remaining missions followed in rapid succession. Two 1100-lb. demolition bombs were dropped and were followed by a salvo bombing demonstration, 12 Bombardment airplanes dropping sixty 100-lb. practice bombs as a unit and repeated by flights of six bombers each.

Attack aviation again took off and laid a five-plane smoke screen, immediately followed by all airplanes of the Provisional Bombardment Squadron passing in review past the observation point.

The highly commendable manner in which the test and demonstration were conducted

may be evidenced by the following radiogram received from the Wing Commander:

"The Department Commander desires me to extend to you and members of your command his extreme appreciation and pleasure at the highly efficient manner in which the bombing tests were conducted at Waimanalo May third. It clearly demonstrates to him the high degree of tactical and technical efficiency of the Eighteenth Wing. To the General's commendatory remarks I desire to add that I experienced the greatest gratification and satisfaction from the manner in which the tests were conducted and the results obtained. They conclusively prove that the Eighteenth Wing is a highly efficient and thorough organization capable of performing any mission which it might be called upon.

Emmons."

---oOo---

FRANCE FIELD AIRMEN COOPERATE WITH THE INFANTRY IN MANEUVERS

From March 31st to April 4th, the Howitzer Platoon, Headquarters Company, 14th Infantry, Fort Davis, Canal Zone, made a march across the Isthmus of Panama at the conclusion of the maneuvers. This march was made without, for the most part, of the benefit of trails or roads through the jungles. The Air Corps assisted in contacting the platoon. There is quoted below an extract from the report of the march:

"2. The assistance of the Air Corps was most valuable. Lieut. Callahan, on April 2, under very difficult conditions located us and established contact with us. This was at the identical spot last year that the 2nd Field Artillery report that the Air Corps could not locate their smoke columns. Whereas Lieut. Callahan picked up our smoke columns and through a small opening in the trees was able to read our panel message. On the following day he gave us our location and thereby facilitated plans for movement.

"3. The Air-Ground Liaison on this march demonstrated its value in this country where conditions are far from ideal and shows that its uses are manifold."

---oOo---

PORTION OF CADET LAMPL'S AIRPLANE FOUND

While fishing on Lake St. Clair on May 5th, Mr. P.H. Owen, of Tecumseh, Ontario, discovered a badly battered portion of airplane metal. The wreckage, approximately 2½ feet square, was found about 100 yards offshore on a sand bar, in about four inches of water. A particularly strong northeast wind had been blowing for several days, and it is believed the wreckage was blown inshore during this period. The metal was positively identified as the upper skin cov-

ering of the right wing of the P-26 flown by Cadet Lampl at the time of his disappearance.

Flying Cadet Milton A. Lampl mysteriously disappeared during the night of March 10th, while enroute to Selfridge Field from Cleveland, Ohio. Curiously enough, Mr. Owen had reported hearing the airplane flying in his vicinity between 8:15 and 8:40 p.m., on the evening of March 10th and, after a thorough search of the area during the period from March 11th to 23rd, his report was filed with the remainder of the 300 odd reports received as to Cadet Lampl's whereabouts.

---oOo---

AERIAL GUNNERY PRACTICE IN HAWAII

The 19th Pursuit Squadron, stationed at Wheeler Field, T.H., moved to Bellows Field, Oahu, for its annual field and aerial gunnery exercises on April 15th, with 12 assigned and 3 attached officers and 65 enlisted men. The move from Wheeler Field was greatly expedited this year, due to the replacement of all wartime Liberty (Class B) trucks. The 45-mile trip to Bellows Field was made with 18 trucks, 5 station wagons, 1 ambulance, 1 trailer and 1 motorcycle in about an hour and 45 minutes.

Bellows Field is located in a flat pocket on southeastern Oahu, approximately 3 miles in length, and bounded on the east by the Pacific Ocean. The western length is bounded by a hard surfaced road. The pocket varies in width from approximately 400 yards on its southern extremity to almost a mile on the north.

Two ranges are located on this land, with the landing field separating them. The field is east of the town of Waimanalo, population 1,500. A mile further inland the Koolau Range of mountains sharply rear their pointed peaks some 2,400 feet. With the field as a center, the range forms a semi-circle.

The field itself is rough and slightly rolling. Two runways have been completed at this writing. The rest of the field is unsuited for landing. The new runway, completed a little over a year ago, runs perpendicular to the shore line. Inland to this older macadam runway, a dirt and gravel extension has been built. In adding this extension it was necessary to cut into a knoll that rises on the west of the field. This cut has added materially to the field, since it has extended the hard surfaced runway in excess of 100 yards. The second runway is a diagonal cinder surface running southeast towards the ocean and crossing the macadam runway. Both runways are approximately 1,500 feet in length.

The buildings on the field are all of frame construction, and consist of officers' quarters, mess hall, a new dispensary, V-6796, A.C.

sary, a Post Exchange, Engineering and Operations building, a bath house for enlisted personnel, and a field maintenance shed. The frames for 30 pyramidal tents are also permanent. All buildings are grouped together south of the landing field. Former occupants will be surprised to learn that the screening is so excellent that the mosquito nuisance of the past is practically non-existent.

For recreation there is an excellent beach 300 yards from the building, which extends the entire length of the reservation. The beach has been so popular that many backs have become overly red. After the evening mess there is always a softball game between the officers and enlisted personnel.

The ground targets are located on the south range. Since last year, three new pits have been built, and targets are now placed on pulleys so that as soon as one order has fired the next can start their runs.

---oOo---

DURABLE FABRIC FOR WING COVERING

A German research worker, who has concentrated on airplane lacquers, has developed a coating on pyroxylin base which is enjoying great popularity among sport and professional constructors of gliders in Germany.

The new coating, called "Special-Flugzeuglack F," is claimed to impart greater strength and adhesion to the fabric with which gliders are covered and prevent all wrinkling, loosening or tearing away of such fabric coverings.

The inventor rejects varnished silk, cotton fabric saturated with oil, rubberized coatings, and starched cloth which have all been used for airplanes and gliders with poor results. All such treatments lower the strength of the fabric, he observes. Cotton cloth, properly painted with the special lacquer, has been found to offer the greatest durability and resistance.

The lacquer "F" is painted with a brush. It comes in two kinds: the primer called "Trankungsmittel F" and the surface coating called "Spannlack F."

These lacquers incorporate admixtures which retard combustion. They are inflammable, but do not burn any faster than untreated cotton fabric.

---oOo---

A Board of Air Corps officers, consisting of Majors Ralph P. Cousins, William S. Gravely, Frederick W. Evans, Edward M. Powers, Captains R.C.W. Blessley, Franklin O. Carroll, Howard Z. Bogert and 1st Lieut. Patrick W. Timberlake, was appointed by Special Orders of the War Department to meet at Wright Field, Dayton, Ohio, for the purpose of appraising the designs submitted for 3-place Observation airplanes, in response to Circular Proposal 35-405.

---oOo---

BIOGRAPHY OF CAPTAIN RANDOLPH P. WILLIAMS

Captain Randolph P. Williams, who will participate in the forthcoming National Geographic Society-Army Air Corps Stratosphere Flight, is one of a limited number of officers in the Air Corps holding four flying ratings - those of Airplane Pilot, Airship Pilot, Airplane Observer and Balloon Observer. He is an officer of high technical attainments, and is particularly well versed in the subject of meteorology.

Captain Williams was born in Baltimore, Md., October 31, 1898. After passing through the elementary schools and attending the Engineer School, Johns Hopkins University, 1915-1916, he received an appointment as cadet at the United States Military Academy, from which institution he graduated in November, 1918, and was commissioned a second lieutenant in the Corps of Engineers.

After attending the Engineer School at Camp Humphreys, Va., from December, 1918, to June, 1920, he was assigned to the 1st U.S. Engineers, and served with the American Forces in Germany until March, 1922. During the course of his service overseas, he commanded Company "B" of that regiment. Following several months' service with the Air Corps, he was assigned to duty with the 2nd U.S. Engineers and served therewith until August, 1924.

From September, 1924, to June, 1925, he was a student at the Engineer School. He then effected a transfer to the Signal Corps, and for several months was on duty in the Meteorological Section, Office of the Chief Signal Officer, Washington.

On September 13, 1925, Captain Williams was detailed to the Air Corps and assigned as student at the Balloon and Airship School at Scott Field, Belleville, Ill. Completing the course at this school in June of the following year, he was rated Balloon Observer and Airship Pilot. He remained at this school in the capacity of instructor until September 1, 1926, when he was assigned to duty with the 12th Airship Company. He was transferred to the Air Corps on October 25, 1927.

After completing a two-year course in Aerology, the first year at the Post Graduate School of the U.S. Naval Academy and the second year at the Massachusetts Institute of Technology, Cambridge, Mass., Captain Williams was assigned as student at the Air Corps Engineering School at Wright Field, Dayton, Ohio, graduating in June, 1932. Immediately thereafter he was assigned as student at the Air Corps Training Center and, after graduating from the Primary Flying School, Randolph Field, and the Advanced Flying School, Kelly Field, he was rated Airplane Pilot and Airplane Observer, June 29, 1933.

From Kelly Field Captain Williams proceeded to Langley Field, Va., where he was on duty as Instructor in advanced aerial navigation. For the past several months he was on temporary duty at Wright Field in connection with the Stratosphere Flight. V-6796, A.C.

SPECIAL G.H.Q. AIR FORCE ISSUE OF NEWS LETTER

The mid-June News Letter, which it is hoped to have "out on the stands" by June 15th, will be a special issue designated the "General Headquarters Air Force Number."

This new fighting unit in the air branch of our military establishment has now passed the initial quarter of its first year's existence, and while three months constitute all too brief a period in which to form definite conclusions with respect to the general adaptability of this new organization in our scheme of National Defense, nevertheless some ideas have no doubt been formed by this time on the subject. On this assumption, the Commander of the G.H.Q. Air Force and several members of his staff have been invited to contribute articles for this special issue, with the G.H.Q. Air Force as the theme of discussion.

Other Air Corps personnel who may have anything of interest to contribute along the above line are invited to forward same over their signatures to the Information Division, Office of the Chief of the Air Corps, not later than June 10th, next.

DISTINGUISHED FLYING CROSS TO LIEUT. FREDERICK L. ANDERSON

Announcement was recently made by the War Department of the award of the Distinguished Flying Cross to 1st Lieut. Frederick L. Anderson, Jr., Air Corps, the citation accompanying same being as follows:

"FREDERICK L. ANDERSON, Jr., first lieutenant, Air Corps, United States Army. For heroism displayed while participating in an aerial flight on December 14, 1934. An airplane piloted by Lieutenant Anderson while maneuvering over San Francisco, California, caught fire. Directing his mechanic to jump and preparing himself to do likewise, Lieutenant Anderson, observing that he was directly over the city, returned to the cockpit, despite the fact that it was almost completely enveloped in flames, piloted the burning plane away

the city and then jumped from the plane in his parachute into San Francisco Bay. The parachute submerged and he was in grave danger of drowning until rescued by one of the crew of the U. S. S. OKLAHOMA. Had Lieutenant Anderson not displayed an extraordinary amount of courage, coolness and disregard for his own self, the airplane would probably have crashed in a congested part of the city, thus possibly causing considerable loss of life and destruction to private property."

Birthplace: Kingston, New York.

Appointed to U.S. Military Academy from New York.

Present station: Crissy Field, Presidio of San Francisco, California.

-----000-----

Twenty-five years ago - on April 23, 1910 - two pioneer aviators, Claude Grahame-White, the Englishman, and Louis Paulhan, the Frenchman, both piloting a Henry Farman airplane, struggled valiantly for the prize of £ 10,000, offered by the London DAILY MAIL for a London to Manchester flight. The winner, Paulhan, took roughly 12 hours for the flight.

Today the regular commercial schedule between these two cities calls for a 1½ hour trip, including one stop.

For 15 hours a balloon which ascended near Moscow was borne by strong winds over the Russian countryside and eventually came to earth in the midst of a pack of wolves, which proceeded to attack its two occupants. Luckily they managed to reach the safety of a peasant's home.

Colonel William C. McChord, and Lt.-Colonel Robert LeG. Walsh, Air Corps, the former commanding the 19th Composite Group and the latter the 16th Pursuit Group in the Panama Canal Zone, are under orders to proceed to Washington, D.C. and report to the Chief of the Air Corps for duty. They are relieved from temporary increased rank effective upon the date of their departure from Panama.

Captains Hugh A. Bivins and Bernard J. Toohar, Air Corps, the former Technical Supervisor of the Fairfield Air Depot Control Area, and the latter Technical Supervisor of the Middletown Air Depot Control Area, are under orders to proceed to Maxwell Field, Montgomery, Alabama, for duty as students at the Air Corps Tactical School.

PRACTICAL DEMONSTRATION OF NAVAL TACTICS

Lieut.-Colonel Herbert A. Dargue, Air Corps, Assistant Commandant at the Air Corps Tactical School, Maxwell Field, Ala., has invented a new means of bringing forcibly to the attention of his students in the Naval Operations Course a practical demonstration of Naval tactics, both in the air and on the ground. In the past this course has consisted mainly of lectures alone, but under the personal supervision of Col. Dargue one of the rooms on the second floor of Austin Hall has been secured and converted into a game room, marked off in squares representing approximately one nautical mile in size.

Small models of the principal classes of surface vessels have been manufactured, so that fleet dispositions of all types may be laid out and moves made on the game board actually to simulate a naval battle.

Airplanes have been introduced by means of a small colored cardboard cut-outs mounted on pins, which may be stuck in the linoleum floor at any desired point to represent a given situation.

Except for the airplanes the entire set-up is to scale and the student viewing the game board from a standing position has a generally correct impression of what he might see from an altitude of from five to ten thousand feet were he flying over the fleet area. About the only condition which it has been impossible to reproduce is the visibility condition, because, in order to make the ship patterns stand out for the normal game that is played on them, they have been painted a brilliant red and a brilliant blue.

It is obvious in the reactions of the students that this visual method of instruction is far more impressive than a series of lectures and diagrams on a blackboard, and it is believed that in the short time available the students obtain a fair idea of the basic principles of Naval Operations.

Lieut.-Colonel Dargue departed for the West Coast recently to serve as Air Corps Observer aboard the U.S.S. SARATOGA in the war games to be held on the Pacific until about June 10th, at which time he will return to Maxwell Field.

---oOo---

HAWAIIAN AIRMEN WELCOME "CLIPPER SHIP"

The Pan-American "Clipper," huge trans-oceanic air liner, flying from Alameda Airport to Pearl Harbor, Hawaii, arrived on the morning of April 17th, and landed at Pearl Harbor, the large Naval Base, at 9:00 a.m. Swift Army and Navy fighting airplanes formed the official escort into the harbor at the completion of the record-breaking seaplane accomplishment of flying the Pacific from California to

Hawaii in 17 hours and 45 minutes. The 6th Pursuit Squadron of Wheeler Field formed the Army part of the escort. A large gathering was on hand to welcome the air liner, and even a wet morning could not dampen their enthusiasm. Not desirous of disappointing the crowds that were informed the ship would land at 9:00 a.m., the huge liner flew about the island for an hour before making her initial landing. Despite the fact that the harbor was choppy, the landing was perfect. As the liner nosed in toward the seaplane ramp at the Fleet Air Base, the escorting planes from Wheeler Field and the Navy seaplanes from Squadron V-10 dipped in salute and headed for their stations.

Before the return flight was made by the "Clipper," all Army fliers from Luke and Wheeler Fields paid their respects to the gallant Captain Musick and his fine crew and were given an opportunity to inspect the big airplane. Major Early E.W. Duncan, at a formal gathering in honor of the "Clipper" personnel, extended the greetings of the 18th Pursuit Group in an address over one of the local broadcasting stations. The flight was a fine accomplishment by the Pan-American "Clipper" and her worthy personnel.

---oOo---

SOARING CONTEST AT ELMIRA, N.Y.

The Sixth National Soaring Contest, conducted by the Soaring Society of America, will be held at Elmira, New York, June 29th to July 14th, inclusive.

An elaborate program is being planned, which will include, for the first time, a four-passenger glider and several two-place gliders. It is announced that the sailplane division will be augmented this year by several new craft that have never heretofore participated in a national contest. America's present soaring champion, Richard C. duPont, is expected to fly the "Albatross I." Former soaring champion, Jack O'Meara, has stated that he will enter his "Chanute," and another former champion, Stanley Smith, is expected to demonstrate a new "Bowlus-duPont" utility glider.

Air Corps personnel, conveniently located, and who can do so without interference with their duties, will undoubtedly derive considerable information of value by attendance at the contest.

---oOo---

To further training in the 7th Bombardment Group, Hamilton Field, Calif., all pilots must fly at least 500 miles in one direction on a radio beam with only three stops enroute. These flights are being undertaken in the B-12 Martin Bombers both during day and night. The average of cross-country flights under this schedule has increased to almost four daily.

Langley Field, on May 11th, was honored by a visit from the Assistant Secretary of War and the House Military Affairs Committee. The party traveled by air from Bolling Field in two airplanes.

In a Condor Transport, piloted by 1st Lieut. Townsend Griffis, Air Corps, Aide to the Assistant Secretary of War, were the Assistant Secretary of War, Hon. Harry H. Woodring; Mr. John J. McSwain, Chairman of the House Military Affairs Committee; Messrs. Samuel L. Collins; Donald H. McLean; Leslie O. Arends; William N. Rogers; Matthew J. Merritt; John M. Costello; Major Richards and Captain Persons.

In a Ford Transport, piloted by Major Phillips, were Messrs. Andrew J. May, Dow W. Harter, Paul J. Kvale, Fraiser, Anderson and Col. Chaffee.

These gentlemen were greeted upon landing at Langley Field by General Andrews and his staff and the Post Commander and his staff. They immediately made an inspection of the post by automobile. The inspecting party were entertained at luncheon by General Andrews at his quarters. At 1:30 p.m., an aerial review was given by the 2nd Wing, G.H.Q. Air Force.

An interesting sidelight was a comparison between the B-6 airplanes with which the Bombardment Group is equipped and a Martin B-10. As the Bombardment Group passed in review, the B-10 flew by just above it. The great difference in speed was noted and commented upon by the inspecting party.

An 18-plane Pursuit squadron, led by Major Rex Stoner, demonstrated the latest Pursuit tactics in a spectacular drill in string and "V" formation.

Following the review, Col. Hugh J. Knerr, Air Corps, Chief of Staff, GHQ Air Force, gave an interesting talk to the members of the inspecting party on the purposes, accomplishments and plans of the GHQ Air Force.

The inspecting party departed for Bolling Field at 3:00 p.m.

---oOo---

EXTENDED AVIGATION FLIGHT BY BOMBERS

Nine B-6 airplanes of the 96th Bombardment Squadron took off on May 15th from Langley Field, Va., on a squadron extended avigation flight which will include the following Air Corps stations: Pope, Maxwell, Barksdale, Randolph Fields, Fort Sill, and Patterson Field. Participating in this flight are nine officers, nine flying cadets and twenty-three enlisted men, led by Major J. K. McDuffie, the Squadron Commander.

---oOo---

The German light cruiser KARLSRUHE, which is on a good will tour and training cruise, recently arrived at the port of Houston, Texas. This vessel came by the way of the Azores and South America to the United States, its first stop in this country being at San Pedro on the Pacific Coast, where it engaged in target practice by permission of the U.S. Navy.

The cruiser, which carries 28 officers, 21 chief petty officers, 120 petty officers, and 321 sailors and cadets, will continue its journey, making several ports of call prior to its return to Kiel in June.

Captain Gunther Sur See Lutjens, Commander of the cruiser, his Adjutant, Lt.-Commander Alfred Schemmel, Lt. William B. Bernreider, and Colonel Vincent Childs, a member of Governor Allred's personal staff, left Houston, Texas, by air on the morning of April 29th. They first flew to Austin, Texas, where they called upon the Governor, and then continued to Kelly Field, where they were met by Colonel Jacob E. Fickel, Commandant of the Advanced Flying School, and Lieut.-Col. Harrison H.C. Richards, Assistant Commandant. The party proceeded to the Aviation Club, where they were later joined by the Mayor of San Antonio, city commissioners, and representatives of civic organizations. After attending a luncheon in their honor in San Antonio, Captain Lutjens and his party returned to Kelly Field to continue their journey by air to Houston to rejoin the cruiser.

Captain Lutjens reports that this is the fourth training cruise for the KARLSRUHE, and it is the third German naval vessel to bear that name. The first of these was sunk off Trinidad during the World War, and the second was sunk after the War as a part of the Allies peace terms.

---oOo---

NEW YORK RENDEZVOUS FOR ARMY AIRMEN

Old-timers of the Air Corps who recently visited the St. Moritz, in New York, found an old friend there in the person of Ex-Captain Eduardo Laborde, National Cuban Army. Captain Laborde will be remembered as a student at practically every flying course given by the Air Corps in the old days. He also graduated from the Technical School at Chanute Field.

The recent political upheaval in Cuba resulted in Captain Laborde, who at the time was senior flying officer in the Cuban Air Force, being left out in the reorganization of the Army. He is now connected with the St. Moritz, where he says all old Air Corps friends will find a welcome from him.

OBITUARIES

During aerial gunnery practice by the 33rd Pursuit Squadron, Langley Field, Va., Flying Cadet G.F. Breck, Jr., while engaged in firing on ground targets, was the victim of a fatal crash. He was given a military funeral at Hampton, Va., being escorted by the enlisted personnel of the Squadron and the officers of the entire 8th Pursuit Group. A blank file formation was also flown over Hampton as his remains left the station, being forwarded to his father, Mr. G.F. Breck, Sr., at Los Angeles, Calif.

Flying Cadet Breck was born at Hot Springs, Ark., November 28, 1910. He attended the University of Southern California for three years and, following his appointment as a Flying Cadet and his graduation from the Primary and Advanced Flying Schools, was assigned to duty at Langley Field, Va., under his Flying Cadet status.

---oOo---

Flying Cadet Lawrence Thomas Allen, a student in the Observation Section at the Air Corps Advanced Flying School, was killed in an airplane accident on the evening of April 23, 1935, near Orange Grove, Jim Wells County, Texas.

Cadet Allen was on an authorized student night navigation flight to Kingsville and Corpus Christi, Texas, at the time of the accident. He left Kelly Field at 7:00 p.m., but failed to check in at either Kingsville or Corpus Christi. His instructors waited long after his gasoline supply must have been exhausted, hoping that he had landed successfully and would be able to report his whereabouts, but no such word was received. It being impracticable to send out a searching party of airplanes during the night, plans were made for the search to begin early the following morning.

A flight of about 35 airplanes, participating in a radio-controlled search, left Kelly Field early in the morning and flew over the areas in which it was considered most likely Cadet Allen might be located. While the search was in progress, word was received from the citizens of Orange Grove that the crash had been located approximately eight miles northeast of that city, and that the pilot had evidently been killed in the accident. The searching planes were recalled, and an ambulance airplane was dispatched to return the body to Kelly Field.

On the following day the remains of Cadet Allen were shipped to his home at McAllen, Texas, in charge of Cadet William Ragsdale, who acted as the escort. The deceased Flying Cadet is survived by his mother, five brothers and four sisters, all of whom live in the Rio Grande Valley.

Cadet Allen made an enviable record through his high school and college, having excelled academically as well as athletically. He was born in Utica, Mo., August 28, 1908. Following his graduation from the Texas College of Arts and Industries, he applied for and received an appointment as a Flying Cadet. Upon completing the course at the Primary Flying School at Randolph Field, he was transferred to Kelly Field on March 1, 1935, to pursue the advanced course.

The loss of such a promising young man is keenly felt, and our deepest sympathy is extended to his family.

---oOo---

The second week of the maneuvers participated in by the 91st Observation Squadron, Crissy Field, in cooperation with the Sixth Brigade, near Monterey, Calif., was saddened by the loss of two of the most popular and efficient members of the 91st. Second Lieutenant Russell E. Laird, Air Reserve, and Private Bernard F. Rygwalski were drowned when their O-26C airplane was forced down in Monterey Bay by motor failure at 1:50 p.m., April 23rd. Lieut. Laird was flying in a formation of five planes. The formation made a wide turn over the Bay, and at the point farthest from shore his engine apparently threw a connecting rod. He failed to reach the beach by about 150 yards. The plane sank immediately, and both men were drowned in the exceptionally heavy surf while trying to reach the beach, despite all efforts made to rescue them.

Private Rygwalski came from Cleveland, Ohio. He enlisted with the 91st in September, 1933, having three years' previous service. He was a credit to his organization, and his place will be hard to fill.

Lieut. Laird's home was Bakersfield, Calif.; his school - the University of Nevada. He completed the course at the Training Center with the Class of October, 1932, and was assigned to Crissy Field for active duty. This status he retained until last February, when he enlisted in the 91st with a commission in the Regular Army in view. Every member of our organization feels a distinct personal loss in his passing.

Lieut. Harold Gunn, Air Reserve, composed the following verse in Lieut. Laird's memory, which is an expression of the sentiments of Crissy Field:

IN MEMORY OF RUSSELL E. LAIRD

We miss you, Russ, we're sorry you went away,
But we know that the flight to the rest
of the great C.O.,
Is one we all must make some day.
We do not weep, but reverently
For one brief moment, we "snap to" and
V-6796, A.C.

salute your memory.
And as in the haze of that far distance
we can see
Your cheerful, dauntless courage, we
find the strength to say,
"Happier landings, Russ,"
And then with saddened hearts we once
more carry on.

---oOo---

FIRST PURSUITERS VISIT BENTON HARBOR

A composite squadron of 15 P-26A's, 2 BT-2B's and one O-19, of the First Pursuit Group, Selfridge Field, Mich., visited Benton Harbor, Mich., on May 10th, during the course of a tactical problem. Major McCormick, Group Operations Officer, led the P-26 Squadron, and Lieut.-Colonel Royce led the Observation element. The Group landed at the Kalamazoo Airport, and then flew over the Cherry Blossom Festival at Benton Harbor. The pilots and men remained at Kalamazoo until 1:00 p.m., May 12th, when the entire Group returned to Selfridge Field, working a tactical problem enroute.

---oOo---

PLENTY OF TROUT AT RAPID CITY, S.D.

Captain John H. McCormick, Air Corps, returned to Langley Field, Va., from a personnel ferry mission to Rapid City, South Dakota. He reports that at Rapid City the stratosphere personnel have a stream with a plentiful supply of trout. In fact, according to his report, the stream is so full of fish that if they do not bite on your fly you can reach in and pull them out with your hands. The trout are kept in a certain portion of the stream by wire netting.

There is a rumor that Captain R.P. Williams was seen fishing, accompanied by three helpers; a man to remove the fish from his line and put them in his basket, a photographer, and a mathematician for weights, measurements and tabulations, all four being extremely busy.

---oOo---

CANAL ZONE PILOTS VISIT COSTA RICA

The first of what is expected to be a series of cross-country training flights into Central American countries from the Canal Zone, was completed on May 2nd by the return of the Headquarters Flight of the 19th Composite Wing to Albrook Field from San Jose, Costa Rica.

The flight consisted of three P-12E's, piloted by Colonel W.C. McChord, Wing Commander; Lieut.-Colonel Charles T. Phillips, Wing Operations and Captain James H. Wallace, Assistant Operations Officer; and two O-19's, piloted by Captains Guy B. Henderson and Hansford W. Pennington. Lieut.-Colonel Fred T. Cruse, General Staff, a former attache of the American Legation at San Jose, and

Corporal John W. Jaeschke were the passengers in the O-19's.

The flight departed from Albrook Field on the morning of April 30th, and after a stop for gas at David, Republic de Panama, arrived at the Costa Rican Capital early in the afternoon of the same day. At the Sabannas landing field the flight was welcomed by Major A.H. Harris, the American Attache; Sr. Mario Jimenez, the Director of Aviation for the Costa Rican Government, and Colonel Francisco Bonilla, the Chief of Police, San Jose, who furnished guards for the airplanes and was careful to see that the personnel of the flight were afforded every possible courtesy during their stay.

No difficulties were experienced in servicing the airplanes, as two local aviation companies, in addition to the Pan-American Airways, are doing a flourishing business at San Jose. The Pan-American Airways operates from its own field some 12 kilometers from the City, while the two local companies operate from the municipally owned Sabannas field. Due to a lack of surface transportation facilities to a number of important plantations and mines in the Republic, the local companies have carried some varied and interesting freight loads. At the time of the arrival of the flight, a local pilot was taking off, carrying an ox-cart for delivery to one of the coffee plantations.

The officers of the flight were the guests at a series of entertainments and were afforded every opportunity to take in the various interesting sights in the Costa Rican Capital.

The cool nights of San Jose, which is approximately 4,000 feet above sea level, afforded a very welcome relief for all the personnel of the flight from the Canal Zone weather.

When the flight departed from San Jose, Colonel McChord decided to lead the P-12E's over the famous Irazu Volcano. The crater of this mountain is over 11,500 feet, and it proved to be a most interesting and awe-inspiring sight. The members of the flight enjoyed a rare privilege when they looked directly into the crater, for usually at all seasons of the year the top of the mountain is covered by heavy clouds.

From Irazu the flight proceeded down the valley of the Rio Grande to Puente Arenas and inspected the landing field there before heading for David. Despite the fact that the "dry season" has theoretically ended, the weather was not difficult at any stage of the flight.

---oOo---

MEMORY OF COLONEL HICKAM PERPETUATED

Under General Orders of the War Department, the flying field comprising Tracts "A" and "B," Hawaiian Department, is designated as "Hickam Field" in honor of Lt.-Col. Horace M. Hickam, killed in an airplane accident on November 5, 1934.

THERE has been recent discussion in Washington as to the allocation of funds of the last "Relief Appropriation" for the purpose of improving existing airports throughout the Continental United States, or constructing new ones where needed. It has been proposed that such funds as are allocated will be given to the various State authorities to carry out the projects within the respective States. The War Department is naturally very much interested in this proposal from the standpoint of National Defense. The better the airport accommodations throughout the Continental United States, the greater will be the facility with which GHQ Air Force units can be concentrated in any part thereof, and the more effective will be the operations in such construction areas.

Since October of 1934, there has been a War Department Board of Officers engaged in the study of airdrome requirements of the GHQ Air Force in the continental United States. It is understood that these studies indicate a lack of airports in certain strategic areas and also the desirability of improving some of the airports along the usually traveled airways.

There have been furnished to all Air Corps stations and commands where airplanes are available questionnaire forms to be filled in for certain of the airports in the vicinity of each station with a request that the information needed to complete same be obtained by reconnaissances made as a part of the regular training schedule.

In the event that the above proposal to furnish Federal Relief funds to the various States for the improvement of airports goes through, it will be highly desirable to have the completed questionnaires available in the Office of the Chief of the Air Corps. These questionnaires can then be used as the basis for recommendations by the War Department to the various State authorities covering the improvement of airports of special importance in the scheme of national defense.

Fortunately, the requirements of national defense coincide with the present development of airports, due to the fact that the centers of population and industrial activity to be protected are naturally the locations of the principal existing airports. In a few areas, other strategic requirements indicate the need for securing more airports than have been developed to date. These needs have been indicated to the various Air Corps station commanders by the list of airports for which questionnaires were furnished in March of this year. These commanding officers can do much to influence the improvement of present airport facilities in those areas where they are now lacking.

---oOo---

Lieut.-Col. Ernest Clark, commanding the 18th Pursuit Group, and Major James V. Hart, the 72nd Bomb. Squadron in the Hawaiian Department, are ordered to duty at Selfridge and Kelly Fields, respectively, and relieved from advanced rank upon departure from Hawaii.

---oOo---

UNFAVORABLE WEATHER HANDICAPS FLYING TRAINING

The present class of students at the Air Corps Advanced Flying School, Kelly Field, Texas, has completed 11 out of 17 weeks' training allotted to this phase of their work. As California sons would say, we have had so much unusual weather lately that students are slightly behind in flying time but well ahead in the ground training which, of course, balances up. The unusual weather had included fog, rain, hail, wind storms, etc. It has rained as much as six inches in one hour, and at this writing a number of cultivated fields are flooded and all rivers in this general area are at flood level. It is not believed that graduation will be delayed on this account, because, as mentioned above, the time lost for flying has been gained by ground instruction, hence the remaining weeks of the course will be spent almost entirely on flying training.

The Attack Section has just completed the student maintenance aerial navigation flight. On the first day the students went from Kelly Field to Abilene

and Fort Sill, and on the second day from Fort Sill to Midland, Carlsbad and Fort Bliss. The third day was spent in maintenance work on the airplanes at Fort Bliss, from which place they returned to Kelly Field by way of Marfa and Dryden on the fourth day. Colonel Jacob E. Fickel, Major Ballantyne and Captains Sweeley, Bradley and Whatley accompanied the students.

---oOo---

INSTRUMENT FLYING AT KELLY FIELD

The instrument flying check required by the Chief of the Air Corps has been completed by most of the officers at Kelly Field, and their training in instrument flying, added to that given students, has increased instrument flying at this station considerably. For example, the 39th Observation Squadron reports that during the past month over 320 hours of instrument flying was done in airplanes of the squadron alone. It is equipped with the FT-2B airplane in which the SCR-183 radio set is installed.

V-6796, A.C.

HAMILTON FIELD DEDICATED

Nearly 20,000 people in about 3,700 automobiles swept into Hamilton Field to witness its official dedication on May 12th. Marvelous Marin, Inc., which had been instrumental in securing the site of Hamilton Field for a flying field, took charge of the dedication program.

One of the imposing ceremonies of the day occurred as the Chairman of the Marin County Board of Supervisors tendered the deed for the 928 acres of Hamilton Field to Governor Frank F. Merriam, of California, who in turn proffered it to Brig. General Henry H. Arnold, the latter accepting it as the official representative of the War Department.

In a very impressive talk, General Arnold touched on the military history of the district and the mission of the 1st Wing of the G.H.Q. Air Force in pro-

tecting the Bay districts. Parachute jumps with an aerial review by the 30 planes of the 7th Bombardment Group, in which Lieut.-Colonel Clarence L. Tinker directed the maneuvers from his Bird O'Prey, with commands over the radio which were heard by all of the assembled thousands through the medium of an amplifier on the ground, contributed to the enjoyment of the event.

Mr. Al Bagshaw, District Attorney of Marin County, presided as Chairman at the dedicatory exercises. Other officials present were Brigadier-Generals James A. Woodruff; W.E. Gillmore; Major F.B. Calloway, Air Officer of the 9th Corps Area, and Warden J.B. Holohan of San Quentin Prison.

This event stamped itself as the biggest one which Hamilton Field has yet experienced.

---oOo---

FLIGHT TESTS FOR AIR CORPS OFFICERS

Of special interest to Air Corps officers is the publication by the War Department of Circular No. 27, May 25, 1935, on the above subject. Under the provisions of paragraph 6, Circular No. 6, War Department, 1935, the following flight test requirements and methods of conducting tests are prescribed:

1. Flight test requirements.--a. With check pilot.

- (1) Take-offs and landings.
- (2) Simulated forced landings.
- (3) Figure 8's on pylons.
- (4) Spins, chandelles, spirals, stalls.
- (5) Accuracy (to include 90°, 180°, approach landings).
- (6) Tests as prescribed in Air Corps Circular 50-1.

b. Solo.

- (1) Formation (wing man of 3-plane element; formation standard of basic stage graduate).
- (2) Strange field landings.
- (3) Cross-country of at least 500 miles radius from starting point, to include one landing away from home airdrome.
- (4) Night flying, to include take-off and landing after dark.
- (5) Night cross-country of at least 100 miles radius from starting point, with one landing away from home airdrome.

2. Method of conducting tests within the continental limits of the United States. -- a. A board to be known as the Flight Test Board will be appointed by the Commanding General of the Air Corps Training Center. The personnel of this board will consist of not less than five officers of the Air Corps Training Center, qualified to administer the flight tests prescribed in paragraph 1, and will include the following:

Director of Training, Air Corps Training Center.

Director of Flying Training, Air Corps Advanced Flying School.

Stage Commander, Basic Stage, Air Corps Primary Flying School.

Report of the Flight Test Board will be made in accordance with paragraph 5d, Circular No. 6, War Department, 1935, as amended, and will include findings and recommendations as to piloting proficiency in accordance with flight tests prescribed in paragraph 1.

b. BT type training planes will be used for flight tests with check pilots. Basic training or tactical type airplanes, to be designated in each individual case by the Flight Test Board, will be used in solo tests. Those tests requiring check pilot will be made by at least three members of the Board. Solo tests will be closely supervised by at least two members of the Board.

c. Personnel taking flight tests will be ferried by air to the Air Corps Training Center 14 days before the date of commencement of tests, in order to familiarize themselves with requirements thereof and for the purpose of familiarization flights with equipment to be used.

3. Method of conducting tests in overseas departments. -- a. Commanding Generals of the Panama, Hawaiian, and Philippine Departments will appoint boards to be known as Flight Test Boards, consisting of five Air Corps officers qualified to administer the flights prescribed in paragraph 1, which will be conducted in accordance with paragraph 2, except that types of airplanes will be designated by the department commander. When available, check pilots will be appointed from personnel who have had flying instructor experience at the Air Corps Training

Center.

b. Commanding generals of oversea departments are authorized to eliminate navigational tests as prescribed in paragraph 1, and to substitute therefor such navigational requirements as are in keeping with the physical and geographical limitations of their departments. Tests prescribed in Air Corps Circular 50-1 will be carried out insofar as equipment and radio facilities permit. The type or types of airplanes to be used for the tests will be designated by department commanders concerned. Report of flight tests will be made in accordance with paragraph 5d, Circular No. 6, War Department, 1935.

---oOo---

AIR WAR OVER CALIFORNIA'S CAPITAL

Roaring to their first extended war problem, the fleet Bombers of the 7th Bombardment Group was scheduled to leave Hamilton Field at 7:00 a.m., May 20th, for their maneuvers over the State Capital for ten days of simulated conflict.

Tactical problems and instrument flying will be stressed in flying training. Should the Wing Commander order a flight over the San Diego Exposition, the night of May 29th has been tentatively reserved for that mission.

Ground training during this period will emphasize pistol firing and ground machine guns. Old Mather Field will be occupied. An advance echelon of 90 men from the 70th Service Squadron, under command of Captain Alvord V.P. Anderson, will pitch a tent city that will remind one of the Gold Rush days of '49 in this area. In this reoccupation of Mather Field, Col. Tinker will remember vividly his first experience there as commander of the 20th Pursuit Group.

Captain Anderson rapidly mobilized his advance force at Mather Field with the aid of the 53 trucks and the 10 motorcycles of the 7th Bombardment Group's tactical transportation. Upon the arrival of the flying units, the camp was prepared for them. The 70th Service Squadron will furnish supply, repairs and maintenance service to all units of the Group while at Mather Field. A comfortable uniform of blouse, slacks and overseas cap was prescribed for wear in the field. Sacramento will see 30 planes maneuver over it during this aerial mock war.

---oOo---

CALIFORNIA'S YOUTH AIR-MINDED

Evidence of the keen interest in aviation on the part of the youthful population of California is shown in the frequent visits made to Hamilton Field, Calif., by various groups of school children.

Forty automobiles filled with 169 4-H

boys and girls of Sonoma County lined up at the entrance to the field recently. The visitors, who are doing agricultural extension work with the University of California, parked their cars on the circle around Post Headquarters and then on foot inspected the shops, operations office, the Bombers in Hangar 5, the fire department, one mess hall and day room in the barracks of the combat units.

Several days later, two groups of Catholic young people, comprising 50 boys from the Sanctuary Society of St. Mary's Cathedral of San Francisco, and twelve members of the Catholic Daughters of America, visited the field. The boys inspected the Martin Bombers, while the young ladies, under the guidance of Chaplain Stanley J. Reilly, made a tour of the post.

Among other school children who have visited Hamilton Field were 37 students of the aeronautical class in the Modesto high school with their teacher, Mr. J.P. Nystrom. The theory of the controllable pitch propellers, and many other salient features of the Martin Bombers were taught these students. The El Verano and the Tule Vista grade children also inspected the hangars and the planes.

---oOo---

AIRMEN PATROL FLOODED AREAS

After a week of heavy rains, the rivers of western Oklahoma reached the flood stage. On May 19th, Flight "E," 16th Observation Squadron, Fort Sill, Oklahoma, was called on to patrol the flooded area and notify rescue groups, by drop message, the location and condition of any marooned people sighted. By noon of that day the water in this area had subsided, making further aerial patrol unnecessary.

---oOo---

PHOTOGRAPHS AVAILABLE OF FLORIDA AIRPORTS

Funds to the amount of over a million and a half dollars from appropriation for emergency relief were expended in the State of Florida on the improvement of airports and runways. The Information Division, Office of the Chief of the Air Corps, has a complete set of oblique photographs, taken in December, 1934, and January, 1935, showing the present status of these airports.

Any activity planning field exercises in this area, or any individual planning a cross-country flight, can secure the loan of these photographs to assist in furthering their undertaking.

---oOo---

Major Donald B. Phillips, Bolling Field; Captains Don W. Mayhew and Albert F. Glenn, Barksdale Field, are under to proceed to Maxwell Field, Ala., for duty as students at the Air Corps Tactical School. They are relieved from temporary increased rank effective August 28, 1935.

V-6796, A.C.

OFFICERS RELIEVED FROM INCREASED RANK

The following Air Corps officers, who are under orders to attend General or Special Service Schools, are relieved from temporary increased rank on the dates set forth:

Barksdale Field, Ala.: Major Charles C. Chauncey, August 26; Majors John M. Clark, Joseph H. Davidson, Captain Nathan F. Twining, August 28.

Brooks Field, Texas: Major William S. Gravelly, August 27; Captain William T. Hefley, Aug. 30.

Langley Field, Va.: Major Caleb V. Haynes, August 26; Majors Newton Longfellow and Harold A. McGinnis, August 28; Captains William L. Scott, July 31; Elwood R. Quesada, August 28; Louis P. Turner, September 30; 1st Lieuts. Oliver S. Picher, August 31; Thomas C. Darcy, September 30.

March Field, Calif.: Captains Edwin S. Perrin, June 4; John H. Dulligan, July 26.

Mitchel Field, N.Y.: Major Leland W. Miller, August 27.

Randolph Field, Texas: Captains Homer W. Ferguson, August 28; Carl B. McDaniel, August 30.

Selfridge Field, Mich.: Major James E. Parker, August 27; Captains Clark N. Piper, George F. Schlatter, August 31; Minthorne W. Reed, September 30; 1st Lieut. Joe W. Kelly, September 30.

CHANGES OF STATION

To Langley Field, Va.: 1st Lieuts. Dudley D. Hale and Arren H. Higgins, from Signal School, Fort Monmouth, N.J. - Major Melvin B. Asp, from A.C. Technical School, Maxwell Field, Ala. Relieved from temporary rank June 29, 1935. - Captains Joseph A. Bulger, 80th Service Squadron, Panama; Glen O. Barcus, 19th Pursuit Squadron and John E. Bodle, 18th Pursuit Group, Hawaii, relieved from temporary rank effective upon date of departure - 1st Lt. Earle W. Hockenberry, from 16th Pursuit Group, Panama, relieved from temporary rank upon date of departure - 1st Lieut. Douglas M. Kilpatrick, 72nd Bomb. Sqdn., Hawaii, relieved from temporary rank on date of departure

To Barksdale Field, La.: Captain George L. Murray, from Kelly Field, for duty with GHQ Air Force, June 29. - Captain Morris R. Nelson, 6th Pursuit Squadron. Relieved from temporary rank upon departure from Hawaii. - Captain James L. Daniel, 18th Pursuit Group, relieved from temporary rank upon departure from Hawaii.

To Bolling Field, D.C.: Captain Ralph E. Koon to 23rd Bomb. Sqdn. Relieved from temporary rank upon departure from Hawaii.

To Chanute Field, Ill.: Captain Richard D. Reeve from 66th Service Squadron, Philippine Dept. Relieved from temporary rank upon date of departure. - Major James E. Duke, Jr., to 19th Pursuit Squadron, relieved from temporary rank upon departure from Hawaii. - 1st Lieut. Albert Boyd, upon completion present course of instruction at A.C. Technical School, that station. - Major

Early E.W. Duncan, 6th Pursuit Squadron. Relieved from temporary rank upon departure from Hawaii.

To Dayton, Ohio: Captain Oakley G. Kelly, from Randolph Field, for duty as Technical Supervisor, Fairfield Air Depot Control Area.

To Harrisburg, Pa.: Captain Henry H. Reilly from Langley Field, for duty as Technical Supervisor, Middletown Air Depot Control Area.

To Hawaii: Captain Idwal H. Edwards from duty as student, Command and General Staff School, Fort Leavenworth, Kansas.

To Hot Springs, Ark., reporting to Army and Navy General Hospital for observation and treatment: Colonel Charles H. Danforth, from Langley Field; Lieut.-Colonel Henry B. Claggett, from Office of the Chief of the Air Corps; Captain Lynwood B. Jacobs from Aberdeen Proving Ground, Md.

To Kelly Field, Texas: 1st Lieut. R.F.C. Vance, upon completion present course of instruction, A.C. Tactical School, Maxwell Field. - 1st Lieut. Russell E. Randall, upon completion present course of instruction at Air Corps Engineering School, Wright Field. Previous orders in his case revoked. - Major Wolcott P. Hayes, 65th Service Squadron, relieved from temporary rank upon departure from Hawaii. - 1st Lieut. William L. Kennedy to 23rd Bombardment Squadron, relieved from temporary rank upon departure from Hawaii.

To Fort Leavenworth, Kansas, for duty as Instructor: Captain Sam L. Ellis, upon completion present course of instruction at Command and General Staff School.

To Little Rock, Ark.: 1st Lieut. Claire Stroh, for duty as Instructor, Air Corps, Arkansas National Guard, upon completion of present course of instruction at A.C. Tactical School, Maxwell Field, Ala.

To March Field, Calif.: Major Hubert R. Harmon, from duty as student, Command and General Staff School, Fort Leavenworth, to duty with 1st Wing, GHQ Air Force. - 1st Lt. Earl C. Robbins and 2nd Lt. Donald H. Baxter from duty as students at Signal School, Fort Monmouth, N.J.

To Maxwell Field, Ala.: Captain Harrison G. Crocker. Previous orders in his case revoked.

To Middletown, Pa.: Captain Russell C. McDonald, from Kelly Field, Texas.

To Mitchel Field, N.Y.: Captain Charles P. Prime to duty with GHQ Air Force from duty with Organized Reserves, 2nd Corps Area. - Captain David P. Laubach, 19th Pursuit Squadron. Relieved from temporary rank upon departure from Hawaii. - Major Burton F. Lewis from Fairfield Air Depot, for duty with GHQ Air Force. Relieved from temporary rank, June 29.

To Panama: Lieut.-Colonel John N. Reynolds from duty as Instructor, Field Artillery School, Fort Sill, about September 5, 1935.

To Randolph Field, Texas: Captain Stanton T. Smith, from duty with Organized Reserves, 5th Corps Area, Schoen Field, Ind. - Major Phillips Melville to the 5th Composite Group,

(Continued on page 17)

Two student officers of the Basic Stage of the Air Corps Primary Flying School, Randolph Field, Texas, had narrow escapes recently on one of their extended night flights, one of them missing death in his burning airplane by a close margin.

Second Lieutenant John M. Hutchison is recovering from scratches and bruises suffered when he was thrown out of his plane as it crashed on the Kuykendall Ranch, near Buda, Texas. He was returning from Austin on a night navigation flight when he ran into low lying clouds near Buda. In the midst of one of them his plane crashed, cutting a swath for 100 yards in the mesquite and brush. When his plane struck the ground, he was thrown out of the cockpit, an incident which probably saved his life. A moment later the plane burst into flames and burned to a skeleton. When Lieut. Hutchison was thrown clear, he lost one of his shoes. A friendly bush broke the force of his fall. He experienced considerable difficulty making his way through the underbrush, cactus and rocks to the nearest ranch house, from which place he was taken to Buda for medical treatment. He returned to Randolph Field the next day by automobile.

The other student, 2nd Lieut. William B. Stone, lost his bearings near Llano on the same night, and when his gasoline supply ran low, he dropped a flare. Fortunately, it happened to be noticed by the chief of the fire department who, suspecting the pilot was seeking to make a landing, used a great deal of thoughtfulness, ingenuity and promptness, and notified the Llano telephone operator to rouse everyone in town who had an automobile and urge them to go to the emergency landing field at the edge of the city. About twenty minutes later, cars from all parts of the town had gathered along one side of the field shining their headlights across the level space.

Lieut. Stone had unbuckled his safety belt and was getting ready to "bail out" when the automobile headlights were turned on. He made a safe landing without difficulty, stayed at Llano overnight and flew the plane back the next day, after additional gasoline had been sent him from Randolph Field.

In his report of the accident, Lieut. Stone stated that he had left Randolph Field and had gone to Austin, his destination, and had started the return trip. He stated that the ceiling was closing to some extent but the beacons were still visible at a thousand feet; that after he passed San Marcos, the beacon at New Braunfels became invisible, so he turned back and endeavored to get back to the emergency landing field at San Marcos, but by that time the beacon there was no longer visible. After fly-

ing for a few minutes at an altitude of 200 feet, he decided to get above the clouds to see if he could find some breaks. He finally came out of the clouds at 10,000 feet, but could not find any edge to them, so stayed at that altitude. About a quarter to twelve, the clouds began to break and, finding a hole in them, he came down to an altitude of about 2,000 feet, at which time he could see the city of Llano. He circled the town two or three times, endeavoring to find a landing field, but being unsuccessful he dropped his first flare. He located a field he thought was suitable for landing and was endeavoring to drag that field when his flare went out. The townspeople apparently were attracted by the flare and had started out in the vicinity in which he was circling.

Climbing back to an altitude of 2,000 feet with a view to dropping the second flare, he decided at that point to jump when the flare would not release itself from the plane. By that time the people had gathered in the field, which at one time had been used as emergency landing field, and a spot light was directed on Lieut. Stone's plane from there, which attracted his attention. He thereupon returned to that field and found that the people had parked their cars along the edge of the field, so that the headlights lighted up the landing area. After discovering there was an area large enough to land in, he had no difficulty in landing in the field with the aid of his wing tip lights.

On the following day the Commanding Officer of Randolph Field wrote a letter to the citizens of Llano, thanking them for their timely courtesy to Lieut. Stone, and commending them on their thoughtfulness, ingenuity and promptness in lighting up the landing field, stating that they were instrumental in averting what might have been a fatal accident, or at least the loss of valuable government property, and extending to the citizens of Llano an invitation to visit Randolph Field as guests of the officers of the post.

---oOo---

PROMOTIONS OF AIR CORPS OFFICERS

Captain Harrison W. Flickinger was promoted to Major, with rank from May 1, 1935.

Promoted to First Lieutenant were 2nd Lieuts. William Ball, rank April 25, 1935; Carl R. Storrie and Merrill D. Burnside, rank April 30th; Hollingsworth F. Gregory, Eugene H. Reebe, Harold W. Grant, Kenneth A. Rogers, Reuben C. Wood, Jr., Leslie O. Peterson, Irving R. Selby, Floyd B. Wood, Theodore M. Bolen, Norman R. Sillin, Flint Garrison, Jr., James L. Jackson, Chester P. Gilger, Hugh A. Parker and Thomas D. Ferguson, with rank from May 1, 1935; Robert B. Davenport, rank from April 20th; Donald L. Futt, rank from April 22, 1935.

Relieved from temporary rank upon date of departure from Hawaii. - Captain Charles T. Skow, from Maxwell Field, Ala.

To Rockwell Air Depot, Coronado, Calif.:

1st Lieut. Charles A. Bassett, upon completion of present course of instruction at University of Michigan, Ann Arbor.

To Rockwell Field, Calif.: Major Howard C. Davidson, for duty with GHQ Air Force, upon completion of present course of instruction at Command and General Staff School, Fort Leavenworth, Kansas.

To Washington, D.C.: Captain Thomas W. Blackburn, from duty as Instructor, 36th Division, Texas National Guard, Houston, to duty in National Guard Bureau, July 5, 1935. - Major Leslie MacDill, from Bolling Field, to duty as a member of War Department, General Staff, August 18, 1935 - Major Edward V. Harbeck, from Barksdale Field, to Office of the Chief of the Air Corps, relieved from temporary rank, June 30, 1935. - Captain William B. Souza, from Langley Field, to Office of the Chief of the Air Corps.

To Wright Field, Ohio.: 1st Lieut. Russell J. Minty, upon completion of present course of instruction, University of Michigan.

DETAILED TO THE AIR CORPS: 2nd Lieuts. Donald F. Buchwald, Infantry, and Richard T. Coiner, Cavalry, and to Randolph Field, Tex. for primary flying training July 1, 1935.

---oOo---

TEMPORARY PROMOTION OF AIR CORPS OFFICERS

To Lieutenant-Colonel

Captain Younger A. Pitts assigned May 16, 1935, as Air Officer, 7th Corps Area.

Major Ira A. Rader assigned as Air Officer of 4th Corps Area, May 11, 1935.

To Major

Captain Lionel H. Dunlap, May 15, to duty as Commander, 66th Service Squadron, Nichols Field, P.I.

Captain Delmar H. Dunton, May 25, 1935, to duty as Supply Officer, Station Complement, Hamilton Field, Calif.

Captain Don L. Hutchins, May 24, 1935, to duty as Supply Officer, 18th Composite Wing, Fort Shafter, T.H.

Captain Carlyle H. Ridenour, May 29, 1935, to duty as Intelligence and Operations Officer, 7th Bombardment Group, Hamilton Field.

To Captain

1st Lieut. Frederick L. Anderson, Jr., May 25, 1935, to duty as Operations Officer, Station Complement, Hamilton Field, Calif.

1st Lieut. Arthur L. Bump, Jr., May 18, to duty as Flight Commander, 21st Observation Squadron, Bolling Field, D.C.

1st Lieut. Paul T. Cullen, May 18, to duty as Flight Commander, 97th Observation Squadron, Mitchel Field, N.Y.

1st Lieut. John F. Egan, May 21, to duty as Flight Commander, 'A' Flight, 17th Pursuit Squadron, Selfridge Field, Mich.

To Captain (Continued)

1st Lieut. John W. Kirby, May 14, assigned as Flight Commander, 2nd Obs. Squadron, Nichols Field, P.I.

1st Lieut. John W. Persons, May 18, assigned Flight Commander, 14th Bombardment Squadron, Bolling Field, D.C.

1st Lieut. James G. Pratt, May 11, assigned as Intelligence and Operations Officer, 87th Pursuit Squadron, Maxwell Field, Ala.

1st Lieut. Lloyd H. Watnee, May 18, assigned as Intelligence and Communications Officer, 1st Wing, March Field, Calif.

To 1st Lieutenant

2nd Lieut. Royden E. Beebe, Jr., May 18, assigned as Engineer Officer, 97th Observation Squadron, Mitchel Field, N.Y.

2nd Lieut. William D. Eckert assigned as Engineer Officer, 29th Pursuit Squadron, Albrook Field, Canal Zone. (May 8, 1935)

2nd Lieut. Charles B. Dougher, May 18, assigned as Transport Officer, 61st Service Squadron, Mitchel Field, N.Y.

2nd Lieut. John C. Gordon, May 11, assigned as Meteorological Officer, Station Complement, Brooks Field, Texas.

2nd Lieut. Paul G. Miller, May 18, to Supply Officer, 96th Bombardment Squadron, Langley Field, Va.

2nd Lieut. Gerald E. Williams, May 18, assigned as Communications Officer, 20th Bombardment Squadron, Langley Field, Va.

---oOo---

CHANGES IN ASSIGNMENTS OF AIR CORPS OFFICERS

1st Lieut. John C. Gordon from Meteorological Officer, Station Complement, Brooks Field, to Supply Officer, 12th Observation Group, at that station.

1st Lieut. Tröup Miller from Supply Officer to Engineer Officer, 20th Bombardment Squadron.

Captain James P. Newberry, from Supply Officer, 12th Obs. Group, to Supply Officer, Station Complement, Brooks Field, Texas.

1st Lieut. Richard J. O'Keefe, from Supply Officer, 25th Bomb. Sqdn., France Field, to Chief Inspector, Panama Air Depot.

Major Lewis R.P. Reese from Intelligence and Operations Officer, 7th Bomb. Group, to Squadron Commander, 69th Service, Hamilton Field.

1st Lt. Wm. O. Senter, from Engineering Officer, 20th Bomb. Sqdn. to Supply Officer, 6th Squadron.

Above officers continue to retain temporary advanced rank.

The following-named officers were relieved from temporary advanced rank:

Major John D. Corkille, Aug. 26th; Lieut.-Col. Laurence F. Stone and 1st Lieut. Joseph F. Carroll, upon departure from Hawaii; Major Harvey Prosser, 66th Service Sqdn. Nichols Field, P.I., May 14th; 1st Lieut. Richard H. Wise, upon departure from Hawaii

Master Sgt. Vernon L. Roberts, A.C., Kelly Field, was appointed Warrant Officer, May 1, '35.

V-6796, A.C.

NOTES FROM AIR CORPS FIELDS



Crissy Field, Calif., May 10, 1935.

Major Floyd E. Galloway succeeded Major Donald P. Muse as Commanding Officer of Crissy Field, Calif., the latter having departed for the Panama Canal Department.

All the officers of the 91st Observation Squadron completed the firing of the preliminary and record pistol courses, under the direction of 1st Lieut. John L. Nedwed, Armament Officer, with highly satisfactory results. The enlisted men have completed the preliminary course.

First Lieuts. F.L. Anderson, Richard C. Lindsay and 2nd Lieut. William Ball were recently transferred to Hamilton Field.

Many of us saw 1st Lieut. George E. Henry slip away from our encampment at Watsonville, Calif., on the morning of April 27th, but no hint had been given that before the setting of the San Francisco sun he would be the groom of the former Miss Barbara Jones, daughter of Major A.M. Jones, Assistant Chief of Staff, 9th Corps Area. They honeymooned at Yosemite National Park and returned in time for Lieut. Henry to commence his monthly contact course with the Coast Artillery on May 1st. The post welcomes the attractive bride.

Wheeler Field, T.H., May 10th.

April 30th was more than just another of Uncle Sam's pay days to his boys. That date saw the 6th Pursuit Squadron gathered to pay homage to one of their fine soldiers, Private Lloyd H. Hess, Specialist, 2nd Class. This veteran, with a round red face and ready smile, was called "Front and Center" while Major Early E.W. Duncan, Commanding the 6th Pursuit, read the certificate from the War Department awarding Hess a Silver Star for bravery in action while a member of Company "A," 28th Infantry, 1st Division, A.E.F. Major Duncan commended Private Hess on behalf of the officers and enlisted men of the 6th.

A small but worthy group of airmen answered "First Call" for the Group Baseball Team. Lieut. Nicholas E. Powell, 6th Pursuit Squadron, appointed coach, faces the difficult job of ruling the destinies of a team which captured the Army laurels of the Hawaiian Division and Department during the past season. Prospects loom brighter than ever before. The Division League officially opened on May 4th, and the Wheeler Field Airmen's first game was with the 3rd Engineers of Schofield Barracks.

Luke Field, T.H., May 10, 1935.

50th Observation Squadron: Weights, loads, etc., are evenly distributed throughout most Observation airplanes, but the 50th encountered a problem which stumps the local aeronautical engineers of the Squadron. The subject matter of lift and correct distribution of physical load at the proper moment to offset the crushing of back rest and fake flooring is presented in the person of Corporal "Jim" Pendleton, weighing 210 pounds and standing over six feet; alas, just too big for a wee O-19B. It was suggested that we place him in his proper element, but as farming is an overcrowded occupation in Hawaii, we must resort to Bombardment Aviation. Upon a recent tow flight, it became necessary for the pilot to ask the Corporal kindly to find a smaller man for the rear cockpit, as it was essential to get off the ground with the maximum run of a mile.

Eight potential mechanics reported for duty with this organization from the Reeruit Training Center at Wheeler Field. These additional men were welcomed with open arms by the line chief.

First Lieut. J.M. Chappell reported in from leave on April 15th. Incidentally, he deserted the ranks of the bachelors. Congratulations!

4th Observation Squadron: During the first part of April, this Squadron engaged in various tactical missions, which consisted of aerial gunnery on towed targets, both pilots and observers, many missions with the flexible guns being fired; instrument flying, which under the able direction of Capt. Rogers, has proceeded with rapid strides; aerial photography; day and night reconnaissance; and combat exercises using camera guns. The Squadron participated in a demonstration flight for Army Day, an aerial review for the Department Commander and a personnel and ship inspection by General Drum, out of which it emerged with a very favorable report. One cooperative mission with the Field Artillery was accomplished. Great stress has been laid on radio communications, both inter-plane and plane-ground, the results showing the value of the ground course being held daily in the Radio Department.

The detachment which has been engaged in tow target work with the anti-aircraft regiment at Waimanalo has returned. The results obtained were entirely satisfactory to both the Air Corps and the Coast Artillery.

The 4th Squadron now having nine O-19's in service has reached the peak of its strength. Having been used almost continuously for the past four years, these ships are nearing the

end of their meritorious career. Their durability under difficult flying conditions stamp them as one of the best of the service ships, but the rapid development of Army aircraft necessitates their retirement from active duty in the near future.

The recent inauguration of temporary promotions brought about many inter-squadron transfers, also a new Operations Officer from the mainland, Captain R.H. Warren, from Randolph Field, Texas, where for several years he was an instructor at the Flying School.

Three non-coms. who arrived on the last transport and joined our squadron were 1st Sgt. Steve Stanowich, from the 19th Airship Squadron, Langley Field; Staff Sgt. Frank Bobulski from the 15th Observation Squadron, Scott Field, and Staff Sgt. Chauncey L. Anderson from the 48th School Squadron, Chanute Field (Crew Chief). Staff Sergeant Arthur E. Soball (Crew Chief) was transferred to the 4th from the 65th Service Sqd.

This week saw the end of a very disastrous baseball season. After winning the title last year, we lost all games this year and finished a dismal last. This can be attributed to scarcity of seasoned players, only three veterans remaining from the previous year. Some promising players were unearthed and we feel confident of doing better next year.

Hawaiian Air Depot, May 10, 1935.

Second Lieut. Marshall Bonner joined the staff of Depot officers on April 25th and was assigned as Officer in Charge of Plans and Estimates Branch and Assistant Adjutant.

The Engineering Section equalled its March record by completing 7 major overhauls of aircraft and one major assembly. Eight engines of various types were also overhauled.

The Depot is just beginning to feel the effects of the big scale maneuvers which are going to occur in and around Hawaii during May and is looking forward with much interest to the visit of the Fleet.

France Field, Panama Canal Zone, May 1, 1935.

The 7th Observation Squadron now has 8 O-19C's in operation. Two planes were surveyed and one was received from overhaul the past month. All planes were painted with the new Air Corps colors, blue and yellow.

First Lieut. William H. McArthur was transferred to the Panama Air Depot, taking over the duties of Assistant Engineering Officer.

The 25th Bombardment Squadron, under the leadership of Lieut. Bernard A. Bridget, entered the new year with a total of five B-3A airplanes and ten pilots. However, by the time the Air Corps Maneuvers ended in February, the Panama Air Depot had recommended three of these for survey. With this skeleton squadron, the cooperative maneuvers were launched. The old keystones were subjected to rather exciting exigencies throughout the period, but survived the heavy duty requirements placed upon them and are still in

commission, though it is a matter of conjecture as to future endurance.

A gunnery camp was established at Rio Hato, and the 25th is busily endeavoring to complete the firing schedule in time to prepare for the proposed Group extended cross-country flight in May. The Squadron is also engaged in flying nightly for the record searchlight practice of the Coast Artillery on the Pacific side.

Major Willis R. Taylor is temporarily laid up with a broken hand, sustained, according to his story, while cranking his motorboat. Several investigations are now under way to check the truth of this story.

Major Homer B. Chandler, who has been ill for the past few weeks, is now convalescing at the Gorgas Hospital.

During the recent inspection by the Inspector General, the Panama Air Depot Detachment Mess and Engineering Shops were highly commended for their appearance and efficient operation.

Air Corps Tactical School, Maxwell Field.

The 54th Bombardment Squadron, captained by the veteran Sergeant "Pat" Casey, third sacker of the team, captured the Inter-Squadron Baseball Championship again this year, winning every game played. The Tactical School Detachment team, coached and supervised by First Baseman "Joe" Childs, finished second, followed by the 34th Service Squadron and the 51st Attack.

Captain Frank F. Everest, Jr., Post Athletic Officer, is busy selecting his Post Team and stated that he believed the Tactical School would place its best baseball team in years in the field against the many teams desiring games in this section of the country.

The Spring Horse Show for the Tactical School was held in the "riding ring," immediately in front of Austin Hall at Maxwell Field on Saturday morning, May 18th, and was one of the most colorful events staged this year. Many visitors from Montgomery and surrounding communities, and all officers and ladies were present in the stands when the show started. The Children's Hack Class opened the show. There were 18 entrants in this event, and the winner was Barbara Slauson, daughter of Capt. and Mrs. Kinsley W. Slauson. In the next event, the Officers' Charger Class, there were 15 entrants, first place going to Lieut. Haywood Hansell, Jr. Jane Eglin won first prize in the Children's Jumping Class, in which there were five entries. In the Ladies Novice Class, five entrants, the prize winner was Mrs. Gates. "Pairs of Road Hacks", the next event on the program, with nine teams competing, was won by Captain Schramm and Mrs. Evans. This event was followed by the "Open Jumping" contest, with ten competitors, Captain Everest being the winner.

The last Class of the Show featured the Ladies Advanced Equitation Class, with 12 entrants, Mrs. McGregor winning first honors.

Hamilton Field, Calif., May 20th.

Captain Don L. Hutchins, former post commander and executive officer at the field, sailed for Honolulu on May 17th. It is believed he will take up duties intimately connected with the construction of the new \$11,000,000 flying field to be located between Watertown and John Rodgers Airport.

Captain Walter B. Hough, who was sick at Walter Reed General Hospital for many months, reported for duty on May 1st and was appointed Executive Officer to fill the vacancy caused by Captain Hutchins' transfer.

Lieut.-Col. Glenn I. Jones, until recently Chief Flight Surgeon in the Office of the Chief of the Air Corps, arrived at the post to take over the duties of Post Surgeon which Major Fabian L. Pratt formerly administered.

Major Guy Kirksey was appointed Station Inspector, relieving Capt. Charles B. Stone, III.

First Lieut. Richard C. Lindsay and 2nd Lt. William Ball were transferred here from Gissy Field, the latter being placed on special duty with the Group Operations Officer.

Majors L.R.P. Reese, Fabian L. Pratt and Capt. James W. Spry were designated as the Aircraft Accident Classification Committee for the 7th Bombardment Group.

Sgt. Erik W. Lindhe, on duty in the Office of the Station Inspector, was promoted to Staff Sergeant on April 26th.

Second Lieuts. Cady R. Bullock and William C. Capp, Air Reserve, sailed for duty in Hawaii on May 17th.

Departures of enlisted men for other stations were as follows: Staff Sgt. Bruno Wetzorke to the Philippines, Oct. 9th; Tech. Sgt. William B. Moorhead, 69th Service Squadron, to the Philippines, Sept. 14th; Staff Sgt. Oliver E. Lindsey, now at Letterman General Hospital, to the Philippines, October 9th; Tech. Sgt. Walter A. Waddell, 9th Bomb. Sqdn., to Panama, July 30th; Master Sgt. George W. Kraft, on detached service here, to the 40th Attack Squadron, Kelly Field; Private John A. Troesser, 11th Bomb. Sqdn., to Mitchell Field, May 20th; Staff Sgt. Dominic Dennis, Station Complement, to Hawaii, June 11th.

A Board of Officers, consisting of Major Arthur G. Hamilton, Captain A.V.P. Anderson and 1st Lt. Roy H. Lynn, will meet on June 2d to conduct an examination for air mechanics.

Staff Sgt. Axel Bishop, who has over 20 years of service with the colors, became Mr. Axel Bishop recently. His background as a 2d Lieut. in the Sanitary Corps during the World War qualified him for the position which assiduous attention to duty gained him. It is believed Mr. Bishop will serve in his capacity as Warrant Officer in the Air Corps Supply at this station if present recommendations are approved.

Col. Clarence L. Tinker took off in his Bird O'Prey at 8:00 a.m., May 20th, for the 7th Bombardment Group Maneuvers at Sacramento, with Captain C.B. Stone, III, as co-pilot; Tech. Sgt. Feder Berg as Crew Chief and Sgt. Allan P. Cross as radio operator. After the original take-offs of the Bombers of the combat units at 7:00 a.m., the planes flew to Mather Field, deposited their load of men and baggage and then returned to Hamilton Field for additional impedimenta and passengers.

Stuart B. Dunbar, publicity director for the Redwood Empire Association, accompanied by Fred Mae, still and movie photographer, secured excellent shots of the take-offs of the Bombers for the Sacramento Maneuvers and close-up shots of Lt.-Col. Tinker and Capt. Stone as they boarded the Bird O'Prey. These news reels are to be used for publicity purposes at the San Diego Exposition by the Redwood Empire Assn. Movie panoramas of the Marin air field were also taken from the top of the water tower.

While the Bombers are at Mather Field, 2nd Lt. Duncan J. Powers, Air Reserve, Group Athletic Officer, has drawn up an intensive program of athletics for the left-behinds of the combat units of the 7th Bombardment Group and the 70th Service Squadron.

Stock in the Hamilton Field baseball club is going up. Under the leadership of Tech. Sgt. John Suggs, the post nine defeated the San Rafael Town nine, 5 to 2; the Harmony Grove Druids of Petaluma, 3 to 0; the crack Tamalpais High Swatsmen, 4 to 3, and the San Rafael town team for the second time, 7 to 2. During the maneuvers, all games were cancelled, and it is possible that the tactical activities may prevent the resumption of scheduled games. The Inter-Squadron league games were washed out, because it is impractical for a combat unit of 49 men to care for its Bombers under an intensive training schedule and at the same time play baseball.

During the recent quarterly test of airplanes, the Bombers, with full military loads, were inspected for fitness for three days of field operations. Major L.R.P. Reese examined armament; Capt. James W. Spry, mechanical efficiency and for correct amounts of engineering supplies; and Capt. E.T. Noyes, flying equipment and clothing. Afterwards the planes sped off with their full military loads, not to exceed 2,200 pounds, with the gunners firing 25 rounds from each machine gun to test its response.

With a score of swift war birds, Lt.-Colonel Tinker flew to the third rendezvous of the 1st Wing, GHQ Air Force, at March Field on May 4th. In his Bird O'Prey, the Flight Commander of the 7th Bombardment Group led the largest force of Martin Bombers that the striking arm of Hamilton Field has yet mustered for a Wing concentration.

Second Lt. Lloyd H. Watnee, former post signal and meteorological officer at Hamilton Field, was transferred to March Field.

Major Robert C. Murphy spoke on "Mothers" before the American Legion Auxiliary of San Anselmo on May 10th, Mothers' Day.

Capt. Delmar H. Dunton has taken up the duties of Major Devereux M. Myers as Air Corps Supply Officer, Engineer Officer and Purchasing and Contracting Officer. He was also detailed as Ordnance and Chemical Warfare Officer. Major Myers retains command of the 70th Service Sqdn.

Officially named the 11th Aero Squadron June 26, 1917, while at Kelly Field as a "war baby," the 11th Bombardment Squadron on March 20th became a combat unit of 49 men. Major Arthur G. Hamilton, who assumed command of the Squadron on October 9th, is still in command. Other regular officers assigned to the 11th are Capt. D.R. Lyon, Walter Agee and Lt. A.K. Dodson. Reserve officers of this organization are Lts. O.M. Nelson, N.O. Sprunger, A.R. Luedecke, and the Flying Cadets are R.H. Volin and H.E. Knieriem.

Lieut. Glen C. Moser was transferred from this station to March Field on April 26th.

Philippine Air Depot, Nichols Field, P.I.

Capt. Charles W. O'Connor returned from detached service at Baguio and is again in charge of the Engineering Section.

Mr. C.L. Lambert, Shop Superintendent of the Engineering Section of the Depot, is now on his first long leave since he joined the Section in 1927. Mr. P.T. Spicer is acting as Shop Superintendent during Mr. Lambert's absence.

Fort Sill, Oklahoma, May 20th.

Col. Jacob E. Fickel, commanding a flight of 13 airplanes from the Attack Section of the A.C. Advanced Flying School, Kelly Field, arrived here May 11th and departed the following day for El Paso via Midland.

Major McDuffie, leading a flight of 9 B-6A planes from Langley Field, Va., arrived here May 18th and departed on the 19th for Fairfield via Scott Field, Ill.

The Air Corps baseball team kept a clean record to date by defeating Ordnance 10 to 0 behind the 2-hit pitching of Igmundson.

Langley Field, Va., May 16, 1935.

The 33rd Pursuit Squadron had a run of misfortune in its early season gunnery practice. While firing on ground targets on the Plum Tree Island Range on April 29th, 1st Lt. A.J. Hanna was seriously injured when his plane crashed. He suffered severe cuts to his left eye, fracture of right knee and concussion of the brain. He is now convalescing at Walter Reed General Hospital.

Major H.A. McGinnis and Capt. A.L. Merrell (Res.) returned from an aerial tour of inspection of the Air Corps supply facilities and systems at Duncan and Randolph Fields and the Fairfield Air Depot.

Capt. R.P. Williams was a recent visitor from his temporary post of duty at Rapid City, S.D. He reports that preparations for the Stratosphere Flight are progressing speedily and efficiently.

San Antonio Air Depot, Texas, May 20th.

The Depot was host recently to a party of Navy air personnel on their annual air tour of military, naval and commercial aeronautical activities, especially assembly and repair establishments. The tour was made in a bi-motored "Condor" Transport plane piloted by Lieut. E.T. Neale, of the Anacostia, D.C. Naval Air Station. All members of the party manifested intense interest in the operations of the Depot. Their visit was thoroughly enjoyed by the Depot personnel and proved of immense benefit in the co-ordination of aircraft engineering matters.

Officers who recently visited the Depot to confer on engineering and supply matters were Major H.A. McGinnis and Captain A.L. Merrell from Langley Field, and Lieuts. L.P. Whitten, J.F. Early and F.D. Klein from the Materiel Division, Wright Field.

Major-General James B. Allison, Chief Signal Officer of the Army, during the course of his recent tour of inspection of Signal Corps activities throughout the country, visited the Depot and conferred with the Commanding Officer, later inspecting the new Signal Corps aircraft radio repair section here.

During April, the Engineering Department overhauled 25 airplanes and 43 engines and repaired 53 airplanes and 48 engines.

The Depot regrets losing Staff Sergeant Opal E. Henderson, from Kelly Field, who was on detached service here since March 4, 1933, as airplane pilot with the supply transport service, and who departed May 17th for service in Hawaii.

The monthly Control Area supply and engineering conference at this Depot on May 7th was attended by Majors C.C. Nutt and T.L. Gilbert from Kelly Field; Lieuts. J.G. Neal and A.M. Kelley, Randolph Field; Capt. P.C. Wilkins and Lt. H.F. Gregory, Fort Sill; Capt. D.W. Mayhue and H.M. Bailey, Barksdale Field, and Capt. H.W. Grant and Lts. D.F. Stace and S.R. Stewart, Brooks Field.

Recent visitors at the Depot were Major George P. Bush, in charge of the Supply Division of the Office of the Chief Signal Officer, in connection with a study of the matter of establishing a Signal Supply Depot; Lieut.-Col. Frank D. Lackland, enroute to Wright Field from an inspection tour; Capt. W.R. Carter, from Maxwell Field, on a ferrying flight, and Major C.S. Johnson, Rockwell Air Depot, on a ferrying flight.

Mr. David M. Warner, Associate Materials Testing Engineer at the Materiel Division, was on several days' temporary duty here instructing Engineering Dept. personnel in the use of magnaflux apparatus.

Mr. Herman Offer, Civil Service Guard at the Depot, retired May 18th, at the age of 70, after nearly 19 years' service. He was watchman at Fort Sam Houston for over five years and served at the Depot continuously from October, 1921. One of our most faithful and efficient employees he takes with him the best wishes of the Depot personnel on his well earned retirement.

The accidental discharge of a pistol which he was cleaning proved fatal to Master Sgt. Frederick A. Aalen, Retired, who was employed as Civil Service guard at the Depot since January. Interment took place on May 6th in the National Cemetery, San Antonio. The deceased is survived by his widow, son, daughter, mother, brother and two sisters.

Lieuts. J.H. Hicks and D.J. Ellinger ferried two FT-3A's to the Rockwell Air Depot and returned with two O-19B's for Kelly Field.

Lieut. Charles H. Deerwester, Asst. Engr. Officer, Middletown, Pa. Air Depot, a recent visitor, became severely ill and was sent to the Station Hospital at Kelly Field pending orders to proceed to the Fitzsimons General Hospital for observation and treatment.

Lieut. and Mrs. Charles K. Moore are receiving congratulations on the arrival on April 25th of their first-born, Kenneth Hart Moore.

Advanced Flying School, Kelly Field, Texas.

Officers at this station who made extended flights recently were Captains G.H. Steel to Aberdeen, Md., in a BT-2B; H.E. Engler to Omaha, Neb., in an O-25; G.C. Jamison to Tucson, Ariz., in a BT-2B, ferrying Lieut. B. Stern, Signal Corps, on an inspection tour; 1st Lieut. C.A. Clark to Winston-Salem, N.C., in an A-3.

When the baseball season began, it was decided to allow the teams which had already begun to play, to continue to play together regardless of transfers which later took place to conform to the new GHQ organization. These transfers, however, have caused a few humorous situations. For example, a man who was formerly in the 43rd Squadron and is playing on that team finds himself playing against the 68th Squadron to which he is now assigned. The men are just as eager to win, however, for their old squadron.

The 68th Squadron, with ten victories and two losses, leads the Kelly Field Baseball League, followed in order by Headquarters team, the 39th, 43rd, 42nd, 41st and 40th Squadrons.

After having been out of the boxing league for several years, Kelly Field re-entered this year, but has a scarcity of material to select from.

The swimming pool has been repainted and new diving boards have been installed. The Spring opening of the pool took place on May 22nd.

The spring weather at San Antonio was appropriately celebrated at the field by an elaborate Spring Dance.

LIBRARY NOTES

Some of the More Interesting Books
and Documents

Recently added to the Air Corps Library

A 00 England 1, No. 38. Orfordness rotating wireless beacons, by Air Ministry, Great Britain, Oct. 1934, 21½ p.

A 00 U.S. 29, 1935, May 4. Senator McAdoo announces drive for world air records, N.A.A. Release, May 6, 1935.

A 00 U.S. 53. 42 Expeditions of the National Geographic Society have cooperated with the U.S. Government, by National Geographic Society, April 9, 1935, 5p.

A 00.2/14. Data on treaties, pacts, alliances, declarations. Assembled by Military Intelligence Div. May 1935, 14p.

D 00.113/2. Provision of high flights with oxygen in military operations, by S.A. Novikoff, June, 1934, 5p. Discusses compressed oxygen and liquid oxygen.

D 52.1/9. The problem of stability in airplanes, by Louis Breguet, 20p.

D 52.7/58. The Italian Dirigible N-1, by Allesandre Guidoni.

E 10.2, U.S. 28. U.S. Aviation and the Air Mail, May, 1934, 20p. From Magazine FORTUNE.

F 10 U.S. 40. Airports and landing fields; a comprehensive review of all phases of this subject, including promotion, public relationship, engineering design and construction, equipment and management, by American Society of Municipal Engineers, Oct. 1931, 71p.

629.1304/Su7. Airman's World; a book about flying, by Peter Supf. 1933, 224p. Purpose of book is to give some impression of the airman's world, of its beauty, majesty and strangeness.

629.17 Su 6. Aircraft, progress and development, by F.H. Surner. 1935. 295p. Book intended to bring the reader in touch with air matters by a world picture of progress in aviation.

629.17 B.76. The Autogiro and how to fly it, by Reginald Brie. 1933. 82p.

92/M32. King of Air Fighters; a biography of Major "Mick" Mannock, V.C., D.S.O., M.C., by Flight-Lieut. Ira Jones, 1934. 303p. Officially acknowledged by Air Ministry to be the leading British air fighter of the War, with 73 victories.

Selected Magazine Articles

Significance of the GHQ Air Force, by Lt. Col. John D. Reardan, U.S. Air Services, May 1935.

Organization of Air Ministry. Revue du Ministère de L'Air, April, 1935. French text.

Contribution of Interior Network of Air Lines to the Organization of National Defense. Les Ailes, April 4, 1935. French text.

War Birds are Flying, by W.B. Courtney. Colliers, May 25, 1935. Europe has three times as many combat planes now than at end of the war. Aviation being groomed for leading roll in event of conflict. Civilian imaginations reel at roar of props and crash of bombs, picturing burning clouds of gas and lethal clouds of bacilli poured from the skies. How true are these visions; what protection against them?

V-6796, A.C.



TECHNICAL INFORMATION

ENGINEERING AND NEWS



AIR CORPS MATERIAL DIVISION

Synthetic Rubber Development.

The use of synthetic rubbers as substitute for the crude rubber employed in the construction of the numerous rubber articles necessary in the Air Corps has kept pace with the technical advances made in the development and manufacture of these synthetics. Crude rubber is necessarily a strategic material, in that there is no source for it of commercial importance within the continental limits of the United States.

Fortunately for all concerned, the synthetic rubbers are superior to crude rubber in the essential points which are of interest to the Air Corps. In particular, they are more resistant to the action of gasoline and most of the familiar solvents, and are more impervious to the diffusion of helium and hydrogen than rubber, making them of value in the construction of balloons and airships.

Of the two commercially important synthetics the one known as Thiccol is used in the construction of hose for the flexible connection in fuel lines on airplanes, and has been standard for the past two years. It is also used as hose equipment for dope and paint sprays.

The second synthetic is known as Duprene, and its possibilities appear to be even better than those of Thiccol. This synthetic can be used with gasoline and all the usual solvents encountered in the service and, in addition, is suitable throughout the entire temperature range of oil hose, which fact presents a distinct advantage over Thiccol. At the present time a standard C-3 Observation balloon made with Duprene coated fabric is being constructed, and will be delivered to the service some time this coming summer. In addition, Duprene is being used in the construction of standard and service test parts in a number of other places.

Automatic Pilot.

Installation of an automatic pilot in a Type YB-12A airplane was completed and the airplane ferried to Bolling Field for the purpose of being placed in service for approximately ten days. At the end of the present mission, this airplane is to be returned to the Materiel Division for complete test of the automatic pilot.

Field Cooking Outfit.

A representative of the Materiel Division visited the Jeffersonville Quartermaster Depot, Jeffersonville, Indiana, for a conference regarding the comments and criticisms which were made by Air Corps activities on the field cooking outfit developed by that depot.

In view of the fact that satisfactory results were obtained in a number of tests by Air Corps activities, it was decided to ship this equipment to March Field, Calif., for further tests during maneuvers on the west coast. At the conclusion of these tests, standardization will be considered after incorporating such changes as have been found desirable.

Cleaning Compound Formulas.

The Air Corps has for some years past purchased cleaning materials for use at the depots in the form of proprietary compounds. This method of procurement was found to be unsatisfactory due to the large variety of cleaning compounds which were offered as the equal of compounds known to be satisfactory for any particular application, and also on account of the differences in water supply and equipment at the several stations which prevented the use of a single formula for all stations. The Materiel Division initiated an investigation of cleaning compounds about a year ago and has successfully formulated several materials which can be used at the several depots with satisfactory results, at an average cost of $3\frac{1}{4}$ cents per pound.

It was found that various modifications of the formula developed for Wright Field were necessary at other depots. A representative of the Materiel Division visited each major depot and, with the assistance and cooperation of personnel at the depots, developed formulas which require the purchase of only six basic ingredients which, after properly mixing, will satisfy our requirements for cleaners. The depots outside the United States will be furnished with formulas with which they may experiment in order to select one for their operating conditions.

Regrinding Crankshafts.

Facilities and equipment have been made available at the Fairfield Air Depot for regrinding all types of crankshafts, and the other air depots have been instructed to ship all crankshafts that they are holding for regrinding to

V-6796, A.C.

the Fairfield Air Depot for accomplishment of this work.

Instrument Training.

In view of the increased instrument requirements and usage in the Air Corps, steps have been taken by the Training and Operations Division of the Office, Chief of the Air Corps, further to educate qualified enlisted personnel at Chanute Field in the installation, operation, inspection, and maintenance of aircraft instruments. To provide adequate test apparatus for these men, the Materiel Division has in process a project to design and procure the necessary equipment as rapidly as possible. Some items are now under procurement and will

-----oOo-----

INSPECTION DIVISION, OFFICE OF THE CHIEF OF THE AIR CORPS

The following difficulties were reported in recent Unsatisfactory Reports:

Broken Valve Adjusting Screw and Ball Assembly No. 9514.

Pratt & Whitney Engine R-1690-11.

1. No. 9514 valve tappet adjusting screw in No. 1 exhaust cylinder broke while in flight.
2. Time on engine, approximately 35 hours. No previous overhaul time.
3. Defective part replaced and turned over to Pratt & Whitney Company's representative at Langley Field, Va.
4. Valve tappet adjusting screw fractured between locking nut and rocker arm. Cause of failure undetermined.
5. No recommendations.
6. Defective part replaced and engine continued in service.
7. Previous unsatisfactory report has been submitted on this subject.

Reply to U.R.:

The damaged adjusting screw removed at Langley Field was forwarded to the Pratt and Whitney Company by their representative, and it was found that the fracture was clean, with no signs of material defect. It is the opinion of Pratt & Whitney Company, as well as this Division, that this and other similar failures were the result of excessive tightening of the adjusting screw lock nut. It is imperative that maintenance personnel be cautioned to tighten these lock nuts snugly but not excessively and under no circumstances to strike the wrench with any object, as in this manner the lock nut is pulled up too tightly, thus preloading the screw and possibly straining the part beyond its elastic limit. Current adjusting screws are fabricated with a fine thread, and since this type is believed to be considerably stronger than the former coarse thread screw it is not believed that failures will be excessive if proper care is exercised to avoid excessive tightening.

Inasmuch as this is the first failure of its kind to be reported to this Division on the late type screw No. 9514, no further ac-

be furnished without requisition to the stations involved as soon as they become available.

Smoke Chemicals.

Captain Kabrich of the Chemical Warfare Service visited this Division for the purpose of coordinating the Air Corps' requirements with reference to provision of equipment for the dissemination of smoke producing chemical. The conference between Captain Kabrich and members of the Engineering Section dealt both with the design features of the container and discharging apparatus and the installation features prevailing in existing Attack type airplanes.

tion will be taken on this report except to record the failure.

Defective Spark Plug Terminals, R-1820-21 Engines:

No. 33-433: Terminal Assy., Ignition wire, Hurley-Townsend Part No. 45305.

After 67 hours and 50 minutes running time the insulation broke down. Upon inspection, cracks were found in the bottom of the passage for the ignition wire. This terminal was used for the rear spark plug of No. 2 cylinder.

No. 33-466: Terminal Assy., Ignition Wire, Hurley-Townsend, Part No. 45305.

After 11 hours and 55 minutes running time the insulation broke down. Upon inspection, cracks were found in the bottom of passage for the ignition wire. This terminal was used for the rear spark plug of No. 1 cylinder.

Reply to U.R's: Considerable trouble has been experienced in the past with the ignition wire terminal assemblies Nos. 45305 and 89198 on R-1820-21 and -37 engines, due to the excessive heat around the spark plug terminal and cooler. In most cases the covering on the ignition cable at the terminal end would burn for a considerable distance, requiring replacement of the entire cable after a short period of time. In order to overcome this trouble, shielded spark plugs were procured and should have been installed on the aforementioned engines as covered in Technical Order 02-1-15.

It is requested that immediate action be taken to replace the present type of spark plugs and the ignition wire terminal assemblies with BG-4B2S spark plugs. The serviceable terminals should be returned to stock for use on other types of Wright engines.

Strainer Assy. Oil (Cuno).

There is being forwarded for examination one Cuno Oil Strainer, Part #27310. It will be noted that this assembly has been very badly mutilated by the use of improper tools when removing it from the engine. It has been noted that at least 50% of these strainers installed in engines received here for overhaul are in approximately the same condition.

It is believed and recommended that Service activities should be instructed to use only a large monkey wrench or that a spanner wrench be designed that would remove this assembly without trouble or mutilation.

Reply to U.R. The damaged cuno strainer received in connection with subject report has been examined and it is evident that this and other assemblies have been badly mutilated by service activities due to the lack of proper tools for the removal of the assemblies from the engines. According to the records of this Division, R-1820-EM engines are equipped with cuno oil strainers No. 27291. A drawing of wrench No. 82743 is enclosed. This wrench has been designed by the Wright Aeronautical Corporation for removal and installation of cuno strainer No. 27291. The manufacturer states that this wrench may be procured in small quantities at \$12.83 net and that deliveries can be made approximately three weeks after receipt of order. A quantity of these wrenches will be procured as soon as possible and distribution made according to the location of R-1820-EM engines. This includes the repair depots.

Airplane P-26A. Report failure of bracket main fuel tank support part number 3-5484 left side rear P-26A airplane Air Number 33-57.

The failure occurred in the right angle bend forward lug of the rear left bracket riveted to the longeron Boeing part number 15-2415-4.

Airplane A-10. Due to vibration of the slots during flight, and the closing and opening of the slots while landing and taking off, excessive rubbing and friction is created between the slot and leading edge of the wing, causing excessive wear of the metal in contact, the wear becoming so pronounced as to penetrate through the skin of the slots in several spots.

Recommend that a means be devised to restrict the surface of both the wing and slot from contacting each other.

Magneto VAG-9D. Subject magneto was installed in R-790-B engine aerial 28-234 which was installed in PT-3 airplane serial 28-233 and failed causing collision on ground with PT-3A airplane aerial No. 29-87. Upon inspection it was found that contact between ground contact stud and primary bridge of coil (part No. 2-3832) was defective and there was evidence of arcing at the contact point which burned off the end of the stud, taking the temper out of primary bridge at the point of contact. This precluded the grounding out of the magneto.

1. Inspection revealed the condition as stated herein. The defective magneto was transferred to the San Antonio Air Depot for repair.

2. Inspection of the following VAG-9D Magnets disclosed the following condition:

a. Magneto #08115 removed from R-790-A Engine #28-140. The lower half of contact spring has no tension and is bent away from the upper half of primary bridge assembly, part

#2-3832. This magneto will be shipped to the San Antonio Air Depot for repair. Time since last overhaul: 123.05 hours.

b. Magnets #071939, installed on R-790-A Engine #29-259, (Time since last overhaul: 79:10 hours) and Magneto #03016, installed on R-790-A Engine #28-176 (Time since last overhaul: 70:35 hours) have also defective primary bridge assemblies, part #2-3832, and will be replaced as soon as overhauled magnets are available.

Finder assy. vertical view Type A-2. 073392.

Lens elements cannot be tightened or locked to insure from loosening and possible loss of front element while in flight. Vibration, against which this equipment is not protected, has been the cause of the loss of a front element at this station.

Recommendation: It is recommended that some means of locking elements in place be devised or that elements in place be devised or that elements be sealed into the barrel similar to that of the K-10 (Fairchild) camera lens.

0166676, Level, assy. Levels have been going dry due to leakage through cemented areas. Some of this equipment has never been installed and therefore it is believed not to have been caused by heat. During a period of two months six out of ten of these levels have gone dry.

Recommendation: Recommend that a more suitable cement be used.

Reply to U.R.:

No locking device is provided on either the front or rear element lens for the type A-2 view finder. These elements are set in their respective barrels very tightly and no locking device has been considered necessary. The lens element should be checked prior to flight to insure that they have not become loosened. Before future procurements are made of this type equipment, the specification will be changed to call for a locking means to be provided on the front and rear element of the lens.

In the manufacture of level vials, the sealing of the liquid is dependent upon the smooth surface of the top coming in contact with the smooth surface of the vial cup. These are held together by the pressure retaining screw against the bottom of the vial and the top of the level seat. It may be that due to shrinkage of the packing in these vials that this pressure is lessened, causing a leakage of the liquid. This can be prevented by filling with new liquid and re-installation of the pressure screw so that it exerts sufficient pressure on the vial cup to make a perfect seal. Since this is the first Unsatisfactory Report received on this equipment, no action will be taken to redesign the vials at this time. This report will be made a matter of record, and if additional Unsatisfactory Reports are received further action will be taken.

Strut Assy. Landing Gear "V" A.C.No. 7-788.
Strut Assy. Oleo, landing gear installed on
P-12C and D airplanes. A.C. No. 8-256.

Replacement of landing gear oleo strut assemblies has been greatly hampered because the inadaptability of the oleo struts received from Air Corps supply stock and the "V" struts on the airplane.

The bolt holes in the flange on the oleo strut do not line up with the hole in the "V" strut, making it necessary to match "V" strut and oleo struts from stock as closely as possible and elongating the holes to fit.

Although a close match was found and the holes were elongated only slightly, those in stock at the Station Air Corps Supply do not match and the holes will have to be elongated beyond any degree of safety.

Recommend that the oleo strut and the "V" strut be issued in a complete assembly, or that the flange on the oleo strut be left blank so that the bolt holes may be drilled locally to fit the "V" strut on the airplane.

Reply to U.R.: Examination of drawings shows that all the attaching holes for the component parts of the landing gear side V strut assembly are jig located at assembly in order to provide for interchangeability. It is the opinion that the parts would not pass inspection if the holes were mislocated and, therefore, the possibility of a slight buckling in the fuselage members between landing gear centers is considered as an explanation of the difficulty reported. If, however, it is shown that this condition does not exist, proper corrections can be made by procuring a quantity of the terminal fittings, part No. 1-10538, without the drag strut attaching holes drilled for use by the activities when the condition reported is encountered. Further comments will be made on this unsatisfactory condition when information is secured as to the possibility of a buckling condition in the fuselage.

From the description contained in the Unsatisfactory Report, it is impossible to determine whether the trouble was encountered with the V strut assembly on or off the airplane. If the trouble in matching the holes is encountered off the airplane, the error is obviously due to mislocation of the holes at manufacture.

The following defects were noted in the type of aircraft listed during recent technical inspections:

- P-12D - Right wheel dragging.
Compass not swung with radio installed.
- P-12D - Compass not swung with radio on.
- P-12D - Rudder stop cables not functioning.
Pointer and dial assembly not synchronized with valve.
- Hose clamp loose.
- P-12C - Rudder stop cables not functioning properly.
- P-12C - Rudder stop cables not adjusted properly.
- P-12C - Stabilizer position indicator not functioning.
- P-12C - Compass light not functioning.

P-12C - Rudder stop cables not adjusted properly.

P-12C - Left brake spring should be replaced.

P-12C - Rudder stop cables not adjusted properly.

P-12C - Shutter control bracket loose.

P-12C - Pointer and dial assembly not synchronized with valve.

P-12C - Right navigation light not functioning.

P-12C - Propeller not oiled.

P-12C - Cylinder fin cracked off around spark plug holes.

P-12C - Tail skid control arm loose at bolt.

A-3B - Technical Order No. 01-1-37 not complied with - battery drain.

Mixture control not adjusted properly

A-3B - Hose connection, main gasoline line, loose.

Technical Order No. 01-1-37 not complied with - battery drain.

Gasoline valve and pointer not synchronized.

A-3B - Booster does not engage until after clutch engages.

A-3B - Battery terminal washer improperly installed.

O-19B - Gasoline leak at pump connection.

O-19B - Gasoline gauge light not functioning.
Wobble pump should be changed.

B-4 - Terminal washers installed improperly one battery.

Gasoline tank cap chain broken.

Hose clamp loose, main gasoline line.

B-4A - Fuselage stencilling patched over.

Primer not functioning.

Engine selective valve and pointer and dial assembly not synchronized.

Hose clamp loose, main gasoline line; connection leaking.

Compass not swung with radio on.

Throttle stop, left engine, not functioning properly.

B-4A - Engine selector valve not satisfactory.

PT-3 - Fire extinguisher not installed on step side of fuselage.

PT-3 - Fire extinguisher improperly installed.

Rubber particles drained from carburetor strainer chamber.

O-38E - Several drain grommets in the bottom of the fuselage unopened.

Inspection plate in the right lower wing not pinned.

O-38B - Wing panels not inspected in accordance with Technical Order 01-1-12 (inspection grommets were unopened).

Under date of May 3, 1935, the Chief Signal Officer issued Signal Corps Supply Letter No. 17, pertaining to Junction Boxes, Type TM-AD-167, procured on order No. 132351 (part of Radio Set, Type SCR-AD-183).

AIR CORPS NEWS LETTER



ISSUED BY
THE OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT WASHINGTON, D.C.

VOL. XVIII

NO. II

JUNE 15, 1935.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

THE AIR FORCE CRUCIBLE

THAT we should be able to employ instantly and effectively a concentrated and coordinated unit, embracing all our combat air strength in the continental United States, has been accepted by most students of air defense for many years. The general acceptance of this doctrine finally resulted in a decision to organize such a unit.

On March 1st, 1935, the headquarters of this new unit, the GHQ Air Force, began to function. This did not mean that the organization of the unit above described was completed. In fact, it was barely begun. And although much has been accomplished in the last three and a half months toward carrying forward the organization of our great "striking force" of the air, by far the greater progress has been made in visualizing the many steps that remain to be taken and the numerous problems still to be solved before we can have a completed organization - an Air Force instantly available for effective operations in any strategic area of continental United States.

The values of these two important terms are relative. What is meant by "instantly available" and "effective operations" as applied to an air force? One definition might be as stated below. To be considered "instantly available" an air unit should be able to fulfil the three following conditions:

- a. Take off with all its airplanes from its home station within forty-eight hours of receipt of the order.
- b. Fly to the designated concentration area at cruising speed, with minimum stop-overs for fuel and oil, at such intervals as are dictated by the range of the planes.
- c. Take off to perform a normal operating mission against the enemy within twenty-four hours after arrival within the concentration area.

To "operate effectively" may be defined as being able to accomplish the assigned mission with at least the average results which either training or war experience has indicated to be practicable for the particular type of unit involved.

To reach the above objectives for

every bombardment, attack, pursuit and long range observation squadron now authorized for the GHQ Air Force presents such a variety of included objectives as to form an adequate task for a large section of the offices of the Chief of Ordnance, Chief of Engineers, Chief Signal Officer and the Quartermaster General, respectively.

The powers and limitations of the Air Force, as one experienced Air Corps officer observed, has been a frequently used term in which all the emphasis to date has been placed upon the "powers" and little or none upon the "limitations." Among the first of the powers which come to mind is mobility. And the Air Force units are truly mobile, once they are in the air with a full load of gasoline and oil and with all equipment functioning perfectly. But the limitations of mobility are suggested above. Can the planes be gotten into the air in this condition to demonstrate their mobility in a reasonable length of time? If not, the true mobility of the unit must be measured by the inclusion of the period of preparation required.

Another one of the powers of aviation which looms large is its "fire power," especially in terms of bombs. But factors limiting these powers are availability at the operating airdrome of an adequate supply of bombs of suitable sizes, presence of trained men to fuze and load these bombs ready for dropping, and of other trained personnel unerringly to conduct the airplanes to the proper release point for the bombs to hit the intended objective and to release them at such point.

A well known factor in overcoming enemy resistance is the maintaining of pressure beyond the power of the foe to overcome by the exertion of his maximum recuperative powers. Unless, therefore, the limitations of an air force permit the repetition of missions at sufficiently frequent intervals to afford the requisite amount of pressure, the powers of that air force will be largely nullified. The enemy will recuperate between blows and be able to withstand each succeeding blow.

The application and development of all these principles of operation are now a direct responsibility of the GHQ Air Force. The operating technique and doctrines to be followed by an air force

in action against various types of objectives and in varying situations must now be formulated authoritatively and promulgated to the Air Force personnel.

Problems of organization are numerous and pressing. Of prime importance among these is a determination of the most advantageous proportions of the various classes of aviation. The "Drum Board" report of October, 1933, is the latest approved statement of the proportions of the various classes of aviation within the Air Force. The continued study of this problem is essential, since the values of the factors upon which the determination should be based are constantly changing. Some of these factors are:

1. The "fire power" or destructive effect of each class against various kinds of targets.

2. The relative supply and operating requirements of the various classes of aviation and the difficulties of meeting such requirements.

3. The relative time required to train replacement personnel to operate the various classes of airplanes.

4. The probable targets of aviation as affecting the provision of the needed amount of each class to attack such targets. In connection with this factor it may be stated that heavy bombardment, because of time for replacement factor, ammunition expenditure factor, and relative vulnerability to fire directed against the airplane itself, should not be employed against targets which can be destroyed or neutralized by smaller bombs which can be carried by lighter airplanes. Nor should long range bombers be used against targets close at hand or which can be brought to short operating ranges.

The tactics of bombardment aviation with reference to the use of short or long lines of operation, i.e., distance from home airdrome to target, offer an engrossing problem for study. Economy of effort and in the consumption of supplies dictates the use of short lines of operation as far as practicable. Security of airdromes and of the airplanes while on the airdromes indicates the use of long lines of operation, which will remove the home airdrome of the operating units to a great distance from the bases of enemy planes.

The use of short lines of operation involves, from considerations of security, the wide dispersion of units on numerous airdromes separated from each other by a number of miles. This dispersion, in turn, involves increased difficulties in control and in the supply of the units. In areas where there are insufficient airdromes it also involves delay in building the needed airdromes. However, it may be possible to have these airdromes (airports) built and ready when the need comes, providing the required cooperation is had with the

various States concerned, to the end that Federal funds allocated to them may be used in part for this purpose.

The great advantages of short lines of operation from dispersed airdromes over long lines of operation from large airdromes well in the rear may be expected to be derived from the use of ground transportation instead of air transportation for a great part of the distance involved, and the use of more easily trained ground personnel for a large volume of the work incident to the operation in lieu of the more highly trained flying personnel in the airplanes.

The first directive given to the GHQ Air Force by the War Department was the test of tentative tables of organization for the included units of the Air Force. This is a vital problem, and its correct solution is basic in establishing the ground work for success of the Air Force. The tentative tables undergoing test are a radical departure from all previous tables for Air Corps units, as well as from the present approved tables of all other arms of the Service. As such they will require the careful analysis and test of actual practice which it is always advisable to give to something so entirely new, and at the same time so vital to successful operations in war.

Only one of these new tables will be considered, that for the Service Squadron. The table for the Service Squadron provides for one hundred and ninety enlisted men in the various grades and ratings, and possessing the various specialist qualifications needed to perform the varied duties falling upon this unit. These duties include for the present, in the absence of any other provision for taking care of them, everything concerned with the operation of three combat squadrons in the field except the actual airdrome servicing and maintenance of the airplanes and their operation in flight. The original concept was that these service squadrons would be interchangeable for any class of unit. This has now been modified, due to the hopelessness of training replacements in war time qualified to handle the widely differing duties connected with servicing any one of the different classes of aviation. Another consideration was the great variation in the work load as between servicing three heavy bombardment squadrons and three single place pursuit squadrons. The table as originally prepared did not provide three identical sections, one for each tactical squadron for a condition where each of the three tactical squadrons served is located on a different airdrome under a situation requiring a dispersed operating basis. In addition there probably will be required a self-service section to take care of the headquarters and administra-

tive personnel of the service squadron itself.

It is believed the above is sufficient to indicate the extent and complexity of the problems facing the GHQ Air Force. The War Department appears to be alive to these problems and to the need for affording every possible aid to the Air Force in order that wise solutions may be reached. One of these aids has been given by the War Department in according rank commensurate with the duties performed. The insignia of this new rank is in the Air Force Crucible along with the wonderful ingredients - youth, energy and opportunity. We shall all await with kindest interest and best wishes for success the product which shall emerge.

Meanwhile, a few catalytics for the boiling pot may be offered. What does the United States desire its military airplanes to do?

The National Defense Act and other legislation indicates that it is the will of the Congress that our military policy shall be one of impregnable defense. It may be assumed with assurance, therefore, that our military planes should be able to protect us from possible enemy airplanes. To harm us seriously, hostile airplanes, flying from a final land base, must fly over many miles of our own relatively unimportant territory in which there are no remunerative targets, in order to reach vital objectives. If our own airplanes operate from advanced airdromes they will be able to employ much shorter lines of operation than the hostile planes.

From dispersed airdromes close up to our land frontier, our airplanes can reach the enemy planes on the ground at the base from which they make their final take-off to attack remunerative targets at considerable distances within the interior of our country. To destroy airplanes on the ground does not require heavy bombs. Light bombers with the necessary range (which can be half or less than half of the enemy bombers) may be reasonably expected successfully to stop enemy air attacks by destroying the hostile airplanes on

the ground.

In the case of an attack from the sea, the hostile airplanes must base on aircraft carriers. The limitations of carrier take-off preclude the use of especially heavy bombers, and hence of especially long range bombers. Therefore, to make the airplane attacks, the hostile carriers must come fairly close to shore and at time of take-off and landing of their planes will be well within the reach of light bombers, which need carry only very light bombs to destroy hostile planes on the carrier decks or to put the deck itself out of commission.

Airplanes operating from land bases against carrier-based airplanes have the following advantages over the latter:

a. They can take off and land in formations as against single ship take-offs and landings, affording a tremendous saving in the time factor.

b. Their flying fields are far less vulnerable to damage than flying decks, and they can have alternate flying fields to use in case primary fields are damaged.

c. If defeated, they can withdraw and disperse to numerous landing fields, while if carrier-based planes are defeated in the air, they face annihilation on the carrier or capture if they land in hostile territory.

d. Their opportunities for information are greater, due to more numerous observation points.

Their disadvantages lie in the ability of the carrier-based planes to select their time of attack, which is known to them and unknown to the shore-based airplanes; and the position of the carrier is movable while that of the targets of its airplanes is fixed.

The Air Force Crucible must melt all conflicting tactical doctrines and methods into one integrated whole. The doctrines must be adapted to the purposes for which the Air Force has been created.

Truly this is a difficult task, which should enlist the earnest aid of all concerned in reaching a correct solution.

---000---



7TH BOMBARDMENT GROUP IN WAR MANEUVERS

Brigadier-General Henry H. Arnold, Air Corps, Commander of the First Wing, GHQ Air Force, inspected the war maneuvers of the 7th Bombardment Group as it sweltered in heat which registered 80 degrees in the shade of their tents.

Dispersion and concentration problems occupied the time of the flying personnel each morning. Extreme secrecy cloaked the point of concentration, which was given out by radio by Lieut.-Colonel Clarence L. Tinker, Commanding Officer of the Group, from his command plane, the Bird O'Prey. Then, as the message was transmitted to the 9th Bombardment Squadron at Mills Field, San Francisco; the 11th at Stockton, and the 31st at Suisun, all flew to the focal point at different rates of speed so as to arrive there at the same time. One of the concentrations was held over beautiful Lake Tahoe.

---oOo---

SACRAMENTO CORDIALLY GREETES ARMY AIRMEN

Hamilton Field personnel are highly appreciative of the enthusiastic reception accorded them by the civilian population of Sacramento on the occasion of the recent field maneuvers over Mather Field, which is 11 miles distant from that city.

Lieut.-Colonel Clarence L. Tinker, formerly commanding the 20th Pursuit Group at Mather Field, has many friends among the townspeople. Many of them expressed the hope that Mather Field might again become a permanent Air Corps post.

---oOo---

DISTRESSING ACCIDENT DURING MANEUVERS

Death rode in the air with the 7th Bombardment Group from Hamilton Field as it engaged in war maneuvers under the leadership of Lieut.-Colonel C.L. Tinker, with Mather Field as a base, during the period from May 20th to May 30th, last.

Second Lieutenant Edgar W. Root, Air Reserve, plunged to death about 15 miles west of Mt. Whitney in Clover Creek, which is in the vicinity of Sequoia National Park. He was piloting a Martin Bomber over which he lost control, and dropped 14,000 feet in a spiral spin. The plane struck a tree and burst into flames. Those who succumbed, in addition to the pilot, were Private, 1st Class, Guy F. Porter, radio operator; and Messrs. A.P. Alexander and Lewis S. Tappan, Fox Movie reel cameramen.

Lieut. Root and Private Porter were members of the 31st Bombardment Squadron, and with 15 other Bombers were flying over Mt. Whitney, the highest

point within the continental limits of the United States, in a war problem.

Only a few months ago, Lieut. Root married Miss Maxine Duffy, whom he had met as a cadet in San Antonio, Texas. At the time of the accident she was living in the quarters assigned this couple at Hamilton Field. Mrs. Root took the remains of her husband to the home of his father, Mr. V.S. Root, at Huntsville, Alabama.

Lieut. Root graduated in 1928 from the Alabama Polytechnic Institute. Appointed a flying cadet, he graduated from the Air Corps Training Center in 1934. He received his commission as a second lieutenant in the Air Reserve on February 28, 1935.

Private Porter is survived by a sister, Mrs. Stella Buck, of Eddyville, Nebraska, to whom the remains were shipped for burial. He was a veteran radio operator with 12 years of service in the Army.

Major Harold D. Smith, commanding the 31st Bombardment Squadron, and an eye witness of the accident, stated that he believed the rear controls of the Bomber were jammed by one of the news reel men falling against them.

Messrs. Alexander and Tappan, Fox technicians, were veterans in the news reel field. At one time they were engaged in taking air photographs in the Orient. They were widely known in movie news reel circles.

---oOo---

AERIAL SURVEY OF FORT BRAGG RESERVATION

The Second Photo Section, Langley Field, Va., has just completed an aerial survey of the Fort Bragg Reservation for the Corps of Engineers. This survey was made with a 5-lens mapping camera at an altitude of 20,000 feet. This is an unusually high altitude for aerial mapping, and it necessitated the use of oxygen breathing apparatus by the pilot and photographer. At an altitude of 20,000 feet the camera used in this survey will photograph an area of 423.49 square miles with one exposure.

An aerial survey of the territory from Hampton Roads, Va., to the Neuse River, North Carolina, is in process at the present time, being made for the Coast and Geodetic Survey, who will use the photographs to establish intermediate control points between their known control points, thus eliminating the necessity of detailed survey by the ground survey party.

---oOo---

Representative Wilcox's bill, authorizing the construction of strategic air bases to provide peace-time training for the Air Force and war-time defense against invasion, passed the House of Representatives on June 5th.

Not a single amendment was proposed to this measure as it was sent to the Senate.

V-6800, A.C.

ITEMS FROM AIR FORCE BULLETINS

The following items have been published to the personnel of the GHQ Air Force from time to time through the medium of Air Force Bulletins issued by the Air Force Headquarters:

The realization that the Air Corps was not organized to permit the use in war of its tremendous striking power to the best advantage led the War Department to create the GHQ Air Force. Under this organization, the tactical command of the Air Force units, formerly divided among the various Corps Area Commanders, is now centralized under the Commanding General, The General Headquarters Air Force. Its war mission will be to conduct offensive air operations against enemy air, ground and sea forces. The execution of these operations will require, according to circumstances, independent air missions or missions in conjunction with friendly ground or naval forces. The functions of the Chief of the Air Corps remain substantially as heretofore.

The GHQ Air Force Strongly Supported.

The GHQ Air Force has the whole power and authority of the War Department behind it. The Chief of Staff, appearing before the proper committees of Congress, has urged that funds be appropriated to procure the full number of 2320 airplanes and corollary accessory equipment recommended by the Special War Department Committee headed by the Hon. Newton D. Baker, the war-time Secretary of War. He has also asked for additional regular officers, enlisted men, Reserve officers and flying cadets. Congress and the President appear sympathetic, and real progress seems to be in sight.

The Concept of the GHQ Air Force.

The whole concept underlying the GHQ Air Force is that of a highly mobile force of great striking power. Like any of the Four Armies, it is directly under the Chief of Staff in time of peace and under the Commander of the Field Forces in time of war. All plans, equipment and training will be based upon the concept of mobility. More and more flying will be expected of the GHQ Air Force units. Field exercises and maneuvers will be held more often, but the actual number of airplanes will be small for some time to come. It will require time for these plans to reach their maximum application, for we are not only short of airplanes and accessory equipment, but also of personnel.

GHQ AIR FORCE AN M DAY FORCE

The GHQ Air Force has been created upon the principle that it shall be an M-day force, immediately ready upon the outbreak of war to execute its mission of defense. Some of the reasons for this concept are:

a. Much time is required to train its personnel.

b. Even more time is required to construct bases and to build its airplanes and corollary equipment.

c. Airplanes are fragile. In storage they deteriorate in physical structure and become obsolete even more rapidly than in use. It is thus impracticable to create a war reserve of airplanes.

Equipment and Unit Training Needed.

An airplane without all of its equipment and a complete crew of trained men should not go to war. For example, a Bombardment Group of 44 modern airplanes, fully equipped, manned and trained, is of more value than several times this number of obsolescent types, partially equipped and manned by partially trained men.

It cannot be overemphasized that the object of all planning and training in the GHQ Air Force is to create a powerful, highly mobile striking force ready at all times for immediate action on M day. It has accordingly been decided that as new airplanes are received, one squadron or group at a time will be brought up to effective strength, rather than allot a few airplanes to each. It will thus be necessary for those units not selected to receive new airplanes to be patient and make the best of what they have. Unit rather than individual training will henceforth be stressed. For example, it is planned that the annual gunnery and bombing matches, to begin in the fall of 1936, will be in the nature of a competition between selected squadrons instead of between individuals.

Measures to Increase Mobility.

Combat squadrons have been skinned to the bone. The functions of service squadrons have been enlarged and station complements have been created, all with a view to increasing the mobility of the combat units. The creation of station complements has long been urged by Air Corps officers to permit the utilization of skilled enlisted men for their proper work on the line, in the shop and in the office. Station complements and service squadrons constitute a vital element of the great combat organization they are designed to serve. All commissioned and enlisted members of the service squadrons and station complements must realize that without them a mobile GHQ Air Force could not exist.

Enlisted Men.

The creation of the GHQ Air Force has caused a shortage of enlisted personnel at its various stations and an unsatisfactory distribution of grades and ratings. The Air Corps share of the forthcoming increase in the enlisted strength of the Army will partially relieve the shortage. Studies are being made to relieve the unequal distribution of grades and ratings, it being proposed to assign a high percentage of air mechanics rat-

ings to the combat squadrons and a consequently high percentage of specialist ratings to the service squadrons and station complements. In order to permit everyone to have an equal opportunity to follow the line of work he desires, recruits will normally be assigned to the station complement. Here during their processing period and subsequent service they can determine, within reasonable limits, as to whether they desire to take up office work, outdoor work, technical or combat work. As opportunity arises they will be available as replacements in service and combat squadrons.

Temporary Promotion.

To remedy a situation until recently existing in the Air Corps, under which officers performed duties calling for

higher rank, the War Department placed in effect the temporary promotion system authorized by the Air Corps Act of 1926. This scheme, like many reorganizational features of the GHQ Air Force, is under service test. The policy of rotation of officers into and out of the GHQ Air Force, to foreign service, to the various establishments under the Chief of the Air Corps, to school duty, and to the War Department, Corps Area and Department Staffs will be continued. In this way, some officers now enjoying temporary rank will lose it when the nature of their assignment changes, and others not now possessing temporary rank will receive it.

---oOo---

TRANSCONTINENTAL FERRY FLIGHTS

A six-plane flight to California on a ferry mission recently returned to Langley Field. Major C.V. Haynes was in command, and was accompanied by Captains H.W. Dorr, A.L. Harvey, C.G. Goodrich, Thomas Power and 1st Lieut. O.S. Picher. P-12C airplanes were ferried to March Field, where P-26A's were procured and ferried to Barksdale Field. At the last named field the flight procured P-12F's and proceeded to Langley Field.

One of the outstanding incidents of the flight was the forced landing of Captain Goodrich. When about 50 miles from Tucson, Arizona, he was forced to land in the mountains when his main tank refused to take. After rolling down a mountainside in a ball of what had previously been an airplane, he started walking. He emerged from the desert some hours later at Mescal, Arizona, with

a skinned nose and a horned toad.

Langley Field welcomes home its first qualified and rated "Desert Rat." The Horned toad is behaving admirably and upholding the honor of his flight companions in his Langley Field home.

The flight was held over at El Paso, Texas, for three days on account of weather.

A second flight to March Field was dedicated to disproving the theory that airplanes are the fastest means of transportation. Captains B.J. Peaslee, R.E. Wilson, Lieuts. S.O. Ross, B.E. Nelson and B.S. Harrell took eight days getting to March Field. They encountered headwinds all the way, some as high as 50 miles per hour, dust storms, fog and engine trouble. Eventually, however, all reached Selfridge Field and from there returned to Langley Field by transport.

---oOo---

ADVANCED FLYING CLASS IN READINESS TO GRADUATE

Training for the present class of student officers and flying cadets at the Advanced Flying School, Kelly Field, Texas, is almost completed, and the graduation date has been set for June 22nd. The Chief of the Air Corps has been invited to make the graduation address to the students, and the News Letter Correspondent expresses the hope that the General will find time to attend the exercises.

On May 25th, the average flying time of each student of this class since he came to Kelly Field was 101 hours and 30 minutes, which leaves about 30 hours to go. All sections have completed their student maintenance air navigation flights except one-half of the Pursuit Section. These flights are usually made from Kelly Field to Fort Sill, Oklahoma; thence to El Paso, Texas, and return to Kelly Field. Different routes are followed by the various sections.

The present class began with five Regular Army officers, one foreign officer, and sixty-four flying cadets. These were divided into sections, as follows: Attack, 10 students; Bombardment, 22; Observation, 20; Pursuit, 18. With the exception of one flying cadet, who was killed in an airplane accident, all of this class will graduate.

The new class of students for the Advanced Flying School will arrive on July 1, 1935, and will consist of approximately the following: 33 Regular Army officers; 34 flying cadets, and 3 foreign officers, two of whom are 1st Lieutenants in the Turkish Army and one a 1st Lieutenant in the Mexican Army. These students will be divided into sections, as follows: Attack, 14; Bombardment, 22; Observation, 14; Pursuit, 20.

---oOo---

The 20th Bomb. Squadron, Langley Field, recently visited the plant of the United Aircraft Corporation at Hartford, Conn.

V-6800, A.C.

Let us give the General Headquarters Air Force a year in which to make good! Having passed the first quarter of its one-year test period, some ideas can be formed as to whether this new scheme of organization is likely to survive, whether it is practicable and possesses sufficient merit to warrant its adoption permanently.

It must be admitted, however, that three months is hardly a sufficient period of time to warrant passing judgment on a new organization which had no precedent in this country. Possibly a year may not be sufficient time in which to arrive at any definite conclusion as to whether it fits in properly with our military organization.

To digress for a moment. Let us take the British Air Ministry as an example. Great Britain was the first nation to create a separate air force. The Air Ministry was organized during the World War under the stress of extreme necessity. It is true that considerable opposition was directed toward it by both Army and Navy leaders, but the many air raids over London and other English communities brought matters to a head. There was an outcry against the divided responsibility existing over the air forces of Great Britain and a demand for their unification which could not be disregarded. And now, despite the fact that the British Air Ministry is in its eighteenth year, one notices now and then rumblings of dissatisfaction and discontent and a demand for the old order of things.

It may be assumed, without any fear of contradiction, that the framers of the organization of the GHQ Air Force were not wholly satisfied in their own minds that it was a letter perfect organization. They realized no doubt that flaws therein would be discovered as time went on but, in all probability, they felt that these flaws would eventually be ironed out. It is quite likely that the thought that this new organization would be just feeling its way was a factor which led to the decision to give it a temporary status for the period of one year.

A military air organization is a complex problem at best. Aviation has revolutionized warfare. Prior to the World War, there were no military air tactics to speak of. These tactics were evolved and developed in the years during and following the War. There is this difference

in the situation confronting military aviation which can be hardly claimed to exist to any appreciable extent in other branches of a military establishment. Aviation is subject to constant change. Other combat weapons are subject to change also, but it is generally a gradual one. Aviation is always confronted with the possibility that the modern airplane of to-day may be obsolete in a few weeks. The statement is often heard or seen in print that aviation is still in its infancy. In the light of the startling achievements in aviation in recent years, there seems to be considerable truth in that statement. Take, for instance, one example in air tactics, - Pursuit versus Bombardment. Not so long ago the Pursuit airplane flew circles around the then lumbering Bomber. But what a change has taken place! The Bomber can no longer be placed in the "slow freight" class, and it is almost a match in speed for the fast little Pursuiter. What is the result? Air strategists are now scratching their heads to evolve new tactics to keep the bomber in its proper place or, perhaps, they are commencing to feel dubious as to the future of Pursuit aviation.

What are the views of the civilian, the layman, on the organization of the G.H.Q. Air Force? They are deeply interested in aviation, because it presents to them a popular appeal. Aviation has been constantly in the public eye ever since the Wright Brothers made their first flights at Kitty Hawk, N.C., 32 years ago.

When this country entered the World War, and an immense appropriation was made by Congress for aviation, there were fanciful cartoons in the newspapers depicting American airplanes darkening the skies over the enemy country. But our people soon learned that an aviation industry which did not exist can not be built up overnight, as it were; that it takes time to build airplanes as well as to train pilots.

Following the close of the War, the impetus which aviation received as the outcome of that conflict directed the genius of man toward making bigger, better and faster airplanes. As the years went on, the airplane not only became increasingly reliable, but progressed quickly in speed, range and load-carrying capacity. It began to dawn upon military men and civilians alike that the airplane was destined to play a very prominent role in wars to come; that aviation would revolutionize future conflicts between nations; that a nation weak in air power could hardly hope to cope successfully in a struggle with an

enemy well fortified in that respect.

Why the GHQ Air Force? The American citizen no doubt feels that the military authorities of this nation, alive to the potentiality of the airplane as a combat weapon, have taken steps to solidify the Army Air Corps into an organization lending itself to extreme mobility and the utilization of its striking power to the utmost.

Opinions gathered from civilians touching on the creation of the GHQ Air Force lead to the conclusion that they believe its basic purpose is sound, namely, that ease and rapidity of concentration at any given locality in this country are salient points which make the scheme well worth while.

Civilians - feature writers and others who have written books on military aviation - appear to be convinced that the air arm will figure most conspicuously in future wars, particularly in the initial stages thereof. They quote the old axiom that he who strikes the first blow is more apt to be the victor; they contend that aviation is an offensive arm and they have applied to aviation the theory held by some football coaches to the effect that the best form of defense is offense.

As an offensive arm, they believe that aviation must have perfect teamwork, and that air personnel must be trained to maximum efficiency; that an air force must possess the ability to strike instantly and effectively. They have reached the conclusion that the primary mission of an air force is to keep the enemy out of the air; that aircraft is the best defense against aerial attack; and that failure to defeat the enemy air force renders the defending nation powerless to ward off attacks from the air. They have visualized the consequences following such failure to check enemy aerial aggression. Writers have painted word pictures of these consequences in a manner to cause serious thought and considerable uneasiness. Some writers have painted lurid pictures of the havoc which would be wrought upon civilian populations were the enemy to acquire supremacy of the air and proceed unmolested in its work of dealing death and destruction through aerial bombs and poisonous chemicals.

Statements have appeared in the European press expressing the thought that little or no faith can be placed in the ability of an air force successfully to defend a nation against aerial attack, the contention being that space is so vast that attempts to intercept enemy aircraft would meet with little or no success, particularly in night operations. As a solution to the problem the policy of retaliation is advocated. To the lay mind this would lead

to the conclusion that the Bombing airplane is destined to be the reigning type, thus placing other types of combat airplanes in the supporting class.

American citizens who have given serious thought to this question, believe that such a policy of retaliation, while possibly applicable in Europe, where powerful nations border upon one another, could hardly be accepted in this country, bounded as it is by two wide oceans. There appears to be no intention on their part to discount in any way the present or future range of aircraft, but they can hardly conceive the idea that this country, if subjected to enemy air attack, would hazard sending its airplanes across these vast stretches of water on a mission of retaliation. Thus, they are of the firm belief that effective air defense for the United States hinges on the ability of its air force to keep the enemy out of the air over our own territory, as before stated.

Statements have been frequently noted to the effect that the pilots in the U. S. Army are the best trained in the world. No one appears to have contradicted this. It has also been stated that what the Army Air Corps lacks in quantity it makes up partly in quality. Those who have taken up the aviation question seriously shake their heads in doubt, being alive to the realization that a nation cannot rest secure under such a state of affairs; that a skeleton air force, even though the airplanes are the most modern in the world and the pilots most efficiently trained, is a mighty slender reed upon which to lean.

Whether the GHQ Air Force will become a fixture in our National Defense scheme or whether the American air arm will assume some other form of organization does not seem to concern the lay mind as much as the one word which places the whole situation in a nut shell - RESULTS! The layman believes that, regardless of the form of administration under which the American air force will eventually operate, the all-important essential in our effort to promote national defense is to have the proper kind and the necessary amount of tools with which to work - airplanes and pilots. He has read the oft reiterated statements to the effect that the GHQ Air Force has not the requisite number of airplanes to enable it to function properly, and he likens this situation to that of a liner without propellers or a battleship without guns.

A QUESTION OF PAY FOR OFFICERS TEMPORARILY PROMOTED

Upon the organization of the GHQ Air Force, a Captain of the Air Corps was temporarily promoted to the rank of lieutenant-colonel. This officer enlisted in the Aviation Section, Signal Corps, during the World War; completed his flying training; received appointment as 1st Lieutenant; was subsequently promoted to Captain and, on July 1, 1920, was appointed Captain in the Air Service, Regular Army.

At the end of March, 1935, the officer submitted a voucher, constituting his claim for the difference between the pay of the fourth period and fifth period, from March 2 to 31, while assigned to duty under his temporary increased rank under the provisions of Section 3 of the Act of July 2, 1926, 44 Stat. 782.

Uncertain as to whether he had the authority to make payment on this claim, the Finance Officer of the post referred the matter to the Comptroller General of the United States for decision.

The Comptroller General, after citing Section 3 of the Act above referred to, which authorizes the Secretary of War to assign officers of the Air Corps to various commands and other duties carrying therewith increased rank, including pay and allowances appropriate to such rank, and Circular No. 7, War Department, January 25, 1935, prescribing regulations governing the bestowal of temporary rank for Air Corps officers, also cited Section 1 of the Act of June 10, 1922, 42 Stat. 625, providing:

"The pay of the fifth period shall be paid to * * * lieutenant colonels of the Army * * * who have completed twenty years' service, or whose first appointment in the permanent service was in a grade above that corresponding to captain in the Army, or who were appointed to the Regular Army under the provisions of the first sentence of said Section 24; Act of June 3, 1916, as amended by the Act of June 4, 1920 * * * .

"The pay of the fourth period shall be paid to lieutenant colonels of the Army * * * who are not entitled to the pay of the fifth or sixth period. * * * "

The first sentence of Sec. 24, Act of June 3, 1916, as amended by the Act of June 4, 1920, is as follows:

"Sec. 24. Filling of vacancies. - Not less than one-half of the total number of vacancies caused by this Act, exclusive of those in the Medical Department and among chaplains, shall be filled by the appointment, to date from July 1, 1920, and subject to such examination as the President may prescribe, of persons other than officers of the Regular Army who served as officers of the United States Army at any time between April 6, 1917, and the date of the passage of this Act."

The Comptroller General goes on to say:

"The act of July 2, 1926, cited, provides that the assignment by the Secretary of War of officers of the Air Corps to flying commands shall carry temporary rank 'including pay and allowances appropriate to such rank.' The regulations fix the rank for the duties assigned in this case as lieutenant colonel. The base pay of lieutenant colonel may be in any one of three pay periods, not based on any standard of efficiency, but by reason of length of service or circumstances of entering the service. An officer holding the rank of lieutenant colonel is entitled to base pay of the sixth period if he has completed thirty years' service; to pay of the fifth period (1) if he has completed twenty years' service, (2) if his first appointment in the permanent service was in a grade above that corresponding to captain in the Army, or (3) if appointed to the Regular Army under the provisions of the first sentence of section 24 of the National Defense Act; and to pay of the fourth period if not within the conditions prescribed for the fifth or sixth period. The service record of this officer shows that his first appointment in the Regular Army was in the grade of captain and that he has completed less than 20 years' service. It would appear, however, that he was appointed to the Regular Army under the provisions of the first sentence of section 24 of the National Defense Act. Such statute provided that not less than one-half of the total number of vacancies created thereby should be filled, subject to such examination as the President may prescribe by persons other than officers of the Regular Army who served as officers of the United States during the World War. While claimant's original appointment was in the rank of captain, it nevertheless, was made under the provisions of section 24 of the cited act, and the placing of lieutenant colonels who entered the Regular Army in that manner, in the fifth period without regard to length of service, would appear to have as its purpose the placing of him more nearly on a parity with officers of the regular service who normally would benefit by reason of a longer period of service. See House Report 926, part 2, 67th Congress, 2nd Session, pages 7 and 8. There appears nothing which would limit the application of this exception to officers originally appointed in the rank of lieutenant colonel. Indeed, if it were applicable only to officers who were appointed to the Regular Army under the first sentence of section 24 of the National Defense Act, as amended, June 4, 1920, in the rank of lieutenant colonel the provision would be superfluous as the officer would have been appointed

to the regular Army as a lieutenant colonel - a grade above that of captain and he would be entitled to fifth period pay under that exception. The provision therefore is clearly applicable to officers who entered the service in a lower rank and were thereafter advanced pursu-

---oOo---

EFFICIENCY RATINGS OF AIR CORPS OFFICERS

A comparative study recently made showing the percentages of officers rated as Superior, Excellent, Average and Below Average in the various branches of the Army shows that the Air Corps had the smallest percentage of any branch in the "Superior" and "Excellent" categories, and by far the largest percentage of Average officers. The implications of this comparison are obvious. Air Corps officers have evidently rated on a basis of a much broader knowledge of the whole personnel of the Air Corps than has been the case with rating of officers of other branches. This is easily understood, due to the fact that by means of cross-country flying and frequent assemblies of Air Corps officers from many different stations, Air Corps officers in general are very well acquainted with the accomplishments of a large number of the officers of their branch.

That the Air Corps ratings have been more nearly in accord with the theory of the rating system is shown by the fact that for the other branches considerably more than 50% of the total number of officers were rated either "Excellent" or "Superior." This lends point to the expression frequently heard

---oOo---

GOVERNMENT OF SAN SALVADOR PLEASED WITH VISIT OF ARMY AIRMEN

A squadron of two Bombing and seven Observation planes from France Field, Panama Canal Zone, under the command of Lieut.-Colonel Lewis H. Brereton, Air Corps, recently visited San Salvador, Republic of Salvador, and were favorably received by the officials of the Republic and others. The visiting Army airmen attended a number of social functions given in their honor, one of them being a reception at the Presidential Palace, where the President of the Republic received them with his entire cabinet and sub-cabinet. There were also present about 50 Salvadoran officers, two from each regiment. All of these social functions were attended by the Salvadoran Minister of War and other high officials of the government.

In a letter to the Secretary of State reporting upon the visit of the Army airmen, the Hon. Frank P. Corrigan, American Minister to Salvador, comments most favorably on their conduct during their stay, stating that their behavior

ant to law to the rank of lieutenant colonel. Accordingly, you are advised that claimant's rank and service shows him to be entitled to pay of the fifth period, and payment is authorized on the voucher returned herewith, if otherwise correct."

in connection with rating, "What constitutes an Average officer?"

There are at least two important respects in which the rating of Air Corps officers is working out unfortunately. First, in comparing Air Corps officers with officers of other branches for general details, the Air Corps officer is at a disadvantage. In the second place officers are not considered eligible for Special Service Schools of the Air Corps. This is due to the fact that the Air Corps has adopted the policy of other branches with a more liberal rating experience and requires that an Air Corps officer to be eligible for the Tactical School must have a rating of above Average.

This latter objection can, of course, be met by changing the policy with respect to the admission of Air Corps officers to the Special Service Schools. However, the former disadvantage cannot be cured by any other method than a more liberal attitude on the part of rating officers. It is true, on the other hand, that this disadvantage is more apparent than real, as there are relatively few Air Corps officers being considered along with officers of other branches for details outside the Air Corps.

has been creditable and that they have made a highly favorable impression on the Salvadoran officials and the people with whom they have come in contact. He concludes his letter as follows:

"I believe that that this visit has been favorably received here. Colonel Brereton, through the President and the Minister of War, has invited the Salvadoran Air Force to visit France Field on a return visit of courtesy. The Minister of War accepted and said that he would at a convenient time send a squadron of five Salvadoran airplanes to France Field. A splendid impression was created in governmental circles by this visit, and much credit is due to Colonel Brereton and the officers who comprised the detail.

---oOo---

A very interesting radio test, utilizing both code and voice, was recently conducted by Lieut. G.I. Rhoades, Air Res., Barksdale Field, La. Report on this test will no doubt be issued to the service.

V-6800, A.C.

ATMOSPHERE STERILE AT HIGH ALTITUDE

For the first time in aviation history a test was conducted at an altitude above 20,000 feet to determine whether any bacteria are present in the upper air regions. The highest altitude reached was 28,000 feet. Cultures had never before been taken at this height, and in that sense the flight constituted a record.

A Baltimore physicial engaged in bacteriological research work received the approval of the War Department to make a flight in a Martin Bomber to conduct this test. He exposed a total of 12 plates in the rarefied atmosphere, the first one at 19,000 feet and the others at intervals of 1,000 feet until 28,000 feet was reached. Two plates were exposed between 26,000 and 27,000 feet. Ten of the plates showed no presence of bacteria. One plate exposed at 24,000 and another at 26,000 feet each showed one colony of Staphylococcus, surely a contamination.

In his letter of appreciation to the Chief of Staff, in which he embodied a report on the results of this bacteriological test, the physician stated that the difficulty he encountered and which interfered very materially with carrying out the technique was the extreme cold. It was necessary for him to wear a pair of sterile, thin rubber gloves and to open and expose the plates to fresh and uncontaminated air outside of the plane. This necessitated putting both hands through the machine gunner's opening, unprotected from a high wind and cold. It was planned to expose the plates for one minute, but it was not possible to hold them longer than half a minute. Two of his fingers were rather severely frost-bitten. He states he began using oxygen at 21,000 feet and did not experience any embarrassment of respiration at any time.

"I do not think that the work was done with sufficient accuracy to claim the establishment of any new facts," the physician concluded, "but it surely indicates that the atmosphere above 20,000 feet is sterile."

---oOo---

NEW WORLD'S RECORDS ESTABLISHED

The President of the Transcontinental and Western Air, Inc., Mr. Jack Frye, in a recent letter expressed the appreciation felt by his company for the aid and cooperation given by the Army Air Corps in supplying two-way radio communication between their DC-1 and Bolling Field, D.C. and Willoughby Spit, Norfolk, Va., during the closed course record flights on May 18th last.

As a result of these flights, 19 new American and International speed and load records were established by D.W. Tomlinson and Joseph Bartels. The DC-1 is a giant Douglas monoplane, powered with two 715 h.p. Wright "Cyclone" engines. At present this plane also holds the transcontinental transport speed record.

The two airmen flew 2,000 kilometers, or 1,244 miles, in 6 hours and 30 minutes and 34 seconds, or at an average speed of 190.906 miles an hour, carrying a pay load of 2,000 kilograms, which equals 4,410 pounds.

On the second lap of the triangular course from Floyd Bennett Field, Brooklyn, N.Y., to Bolling Field to Norfolk, and back to Floyd Bennett Field, a slightly better time was made than on the first lap, averaging 191.674 miles an hour. The course covered two laps.

When the plane was brought over Floyd Bennett Field at the end of the first lap of the 621-mile closed course, six new records had been established, the remaining 13 records being accomplished at the conclusion of the second lap.

It was the second record-breaking flight made by Tomlinson and Bartels within a week. Flying the same airplane on May 16th, they established 14 records over the same course. On the 18th, they smashed three existing world's records and nine American and five international marks they set previously. In addition, they established American records for which there had been no previous marks.

But to return to Mr. Fry's letter. After remarking that Captain Marriner in Washington was most helpful to TWA personnel in making the necessary arrangements, he goes on to say:

"The success of the whole undertaking hinged on the ability of the DC-1 crew to maintain uninterrupted two way radio telephone communication with the theodolite observers at each turning point. These flights made history in that for the first time a closed course was being flown at high altitude. Only because the flight crew could advise the observer on each approach to a turn of the plane's altitude and true bearing from the turning point was it possible for the observing party to pick up the plane, follow it through the theodolite telescope, and inform the pilot of the plane's angular elevation.

Communication with the Army station at Bolling Field and Willoughby Spit was perfect. Particularly on the 5,000 kilometer flight, when inclement weather caused abandonment of the last lap in favor of a short course around New York, the radio saved the day. Without the two-way radio facilities it would have been impossible for the crew of the plane to have advised the ground personnel of conditions and arranged for a change of the course.

Please express to all of your person-

V-6800, A.C.

nel who so kindly and efficiently rendered us this service the appreciation felt by the entire Transcontinental & Western Air organization.

Whenever you, or any of your officers, may find occasion to stop at Kansas City, I sincerely trust that you, or they, will give TWA an opportunity to express in a more concrete manner the debt of gratitude we feel toward the Army Air Corps."

---oOo---

TWO CATERPILLAR DEGREES IN SHORT ORDER

Lee Gehlbach, a former 2nd Lieutenant in the Army Air Corps, who several years ago was stationed with the 1st Pursuit Group at Selfridge Field, Mich., seems to be the only member of the Caterpillar Club to have two degrees conferred upon him in rapid succession. An item in the June issue of U.S. AIR SERVICES with regard to Gehlbach's two initiations into the Caterpillar Club is as follows:

"Lee Gehlbach is a pilot who embodies just about all the characteristics that go to make what women writers of verse call a birdman, characteristics that make the real flyers of today a separate and distinct species of the human race. About two months ago, a man of Gehlbach's own stamina, courage and experience - Jimmy Collins - was killed when attempting to meet the Navy requirements for terminal velocity dive and pull-out while testing a Grumman airplane over Long Island. The plane was a total wreck, and it is understood that the manufacturers had no insurance on it. Gehlbach was hired to put a sister Grumman ship through its paces. While flying the plane in a spin test, starting at 12,500 feet altitude, Gehlbach found he could not get the plane to come out of it and, after making more than fifty spins, he was successful in saving his valuable neck and other parts by taking to his parachute at 2,000 feet, over the Navy proving ground at Dahlgren, Va., on Friday afternoon, May 17th.

Just before going to Virginia, Gehlbach stopped over at Cleveland, Ohio, to put a Great Lakes plane through the tests required by the Navy before it could be delivered. The details of the two tests were wholly dissimilar, but the final results of the operations, from the personal viewpoint of the pilot, were not unlike. In each case he survived by a hair's breadth. In each case he took to his parachute at the last possible foot of altitude, and the plane was wrecked. In each case, Gehlbach stayed with the plane - first with the Great Lakes product, then with the Grumman - until there was nothing to do except jump for his life."

---oOo---

WORLD FLIGHT LEADER COMES TO WASHINGTON

Captain Lowell H. Smith, Air Corps, who led the historic flight of U.S. Army

aviators around the world in 1924, has been ordered to duty in the Office of the Chief of the Air Corps, Washington, D.C. Captain Smith is at present a student at the Command and General Staff School, Fort Leavenworth, Kansas. In his new assignment he will have charge of the technical inspection of all the aircraft in the Army, being assisted by four regional supervisors and a corps of inspectors at Air Corps depots.

Of the Army officers who completed the first aerial journey around the world in 1924, Captain Smith is the only one remaining in the military service, the others having resigned from the Army. For his achievement of the flight, Captain Smith was awarded the Distinguished Service Medal. He also holds the Distinguished Flying Cross. He is a graduate of the Air Corps Tactical School and is a member of this year's graduating class of the Command and General Staff School.

---oOo---

"COYOTE" AERIAL GUNNERY

By the News Letter Correspondent

Englishmen have their fox hunts, but they haven't enjoyed nuthin' unless they have participated in "coyote" aerial gunnery.

"Coyote" aerial gunnery is the discovery of the 41st Division Aviation, Washington National Guard, Spokane. Necessary to this highly entertaining form of gunnery training are the wide open spaces in certain sections of the sagebrush-covered northwest in which the grey bushy tail and slim-nosed coyotes roam.

This form of training has been found highly beneficial to officers of the 41st Division Aviation in preparing for their fire for aerial gunnery records during the two weeks' encampment of the 41st Division in June at Fort Lewis and Camp Murray, American Lake.

Flying reasonably low over the sagebrush plains, it is not difficult to "jump up" a coyote who, as he races through the sagebrush, becomes a lively observation target for observers and pilots. Flying down on the coyote, the pilots are given good training in ground gunnery with the camera guns. As the roar of the motor grows louder the coyote doubles his speed, until it appears he believes the airplane is on his back. At this time the "chicken stealer" rares up, shows his fangs and immediately begins turning in various directions until the plane is pulled up.

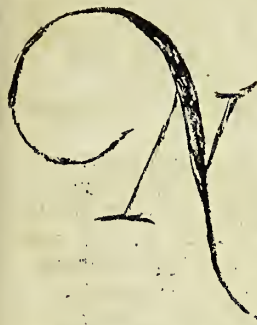
Contrary to the general belief, it is almost impossible to run a coyote to death with an airplane, because after each dive the coyote is smart enough to rest as he dog-trots along.

---oOo---

"THE G.H.Q. WHAT WILL IT DO?"

By

B. Q. Jones, Major, Air Corps.

NEGLECTING for the moment the problem of close support of the ground forces, there remains the encompassing speculation of the national concept of Air Force employment.

Give a man a gun with no target and he will probably wonder what he will do with the gun. Give a man one

target and he will know definitely one use for his gun. But if you give guns to feudist neighbors, no doubt exists as to the prime use of the guns.

Europe with one-fifth the area, a population density almost eight to one of the U.S. and divided among four major nations, provides the Air Forces of England, France, Germany and Italy with definite targets within "local flying" distances of their airdromes. These age old feudists have armed themselves with a new weapon, bombardment aviation, primed for use against each other's homes and territories.

We have no suspicious neighbors. We have no hereditary foes. We have no use for our military except as the trusted weapon of a good citizen of the family of nations to be brought out in national emergencies imposed upon us by the slow evolution of domestic and international affairs.

The geographical position and congestion of European nations fixes their Air Force employment. Their peace time air base locations are suitable for war base operations against innumerable profitable war time targets. There exists no need for Air Force mobility by self-sufficient units operating in many theaters over wide territorial expanses from varied, scattered and hastily prepared airdromes. Their employment is static. They must "dig in" in peace to be secure in war. Their problems of movement, communications and supply can be solved in peace. Their strategic and logistic plans can be consummated at leisure and projected to completion long before the period of strained relations.

Our national temper is but a composite of our typical square-shooting American business man, whose all consuming, earnest attention to the progress of his affairs blinds him to the threat of gangdom. His old family revolver, hidden from his children in a remote top drawer, will protect him, he feels, should his home be invaded.

We, the armed services, are America's good old trusted revolver, laid away in peace, but always guarded and protected from too rigorous inroads by radicalism.

The great American citizen is, in his spare time, sufficiently interested in us to bring us out to view occasionally and polish us up a bit. And when he needs us, he is most unsparing in his attention and support.

In opposition to Europe, we have no belligerent neighbors. And, if we ever did have trouble with them, we would most assuredly hang back on the employment of any weapon that might jeopardize the lives and beings of their defenseless women and children. America doesn't wage war that way. So here we are, all dressed up with the beginnings of a most promising Air Force and quite uncertain in our minds what we'll do with it.

We're quite fed up with any thought of fighting other people's wars, so we cannot project ourselves into a European conception of employment of Air Forces. We have no proximate targets for our bombardment, so we conjure visions of cooperating with our Navy in sinking hostile navies approaching our shores. But, like true Americans, our Navy staunchly asserts they will hold our enemies well off our shores. With our Air Force in being, our second line of coast defense is our bombers; our third line, our seacoast defenses; our final defense, our army in being.

Our concept of employment of G.H.Q. Air Forces must be our own. We can be attentive to and profit by foreign developments in the technique of equipment and employment. We can most assuredly profit by their developments in communications, intelligence nets and warning systems, for communications are as vital to us as to them.

Granting that we lack the concreteness of European doctrines, we can appraise the fundamentals of Air Force as a weapon of war and adapt them to the peculiarities of our national temperament and geography.

Offensively, the airplane can be a terrible weapon, but we shrink from the concept of its general employment against area targets and their defenseless populations. Specific military targets will be presented to test the metal of our units, especially if the targets are defended.

Defensively, air forces are as vital to the success of the general operations as artillery is to the defense of a position.

Our geographical expanse, measured by European standards, is staggering. Our population centers and critical areas are distributed as spotted focii at considerable intervals. Our areas are large, our forces are small. We must cover a lot with a little.

We know a lot and we have learned a

lot about combat aviation. But if we are to be consistent, we must show progress in the art of military aviation commensurate with our claims of rapid change and progress in the powers of the airplane and its equipment.

We know what we can do. We can state our problem. We can prescribe our training. Their synthesis tells us what the G.H.Q. will do.

We in the Air Corps know pretty definitely what our attack, bombardment, observation and pursuit can do. We know how they can be trained to work together, when they can operate to best advantage and when they cannot. Other considerations being equal, we know that to the leader who most intelligently and ably treats logistics goes the greatest success.

What is our problem?

While we cannot, like the Europeans, point indisputably to concrete targets, we can name the targets we can profitably attack. Our operations, therefore, will be broad and versatile.

Our theater is far flung, extending literally thousands of miles. No conceivable peace strength can provide adequately for all localities. We must be prepared to operate here today and there tomorrow. Mobility in its purest form is tantamount.

Divorced as the ground forces are of all but observation aviation, we must be

prepared to render close tactical support to any theater on short notice, only perhaps, to be pulled out unexpectedly for a strategic blow in another and distant theater. Mobility! Versatility! and Strategic Employment! A true GHQ reserve! A "Hat in the Ring" Force fighting in a squared-circle of continental proportions.

A veritable air Navy! In garrison for rest periods, reequipment and for indoctrination and training of new personnel. Then out and over the U. S. as individuals, units and as an Air Force perfecting the technique of movement, operations, communications and supply through a succession of exercises, alone and in cooperation with the ground forces in varied and scattered theaters within our continental limits.

So, what are our Air Force missions?

To move anywhere at any time.

To maintain shelter and subsist itself.

To afford close tactical support to the army.

To afford shore-based support to the Navy.

To defend our critical areas.

To search out and attack profitable targets.

Like our Navy, what we lack at the zero hour, we'll lack for months.

OUR G.H.Q. MUST COME THRU!!!

---oOo---

HIGH ALTITUDE FLYING BY WASHINGTON NATIONAL GUARD AIRMEN

Officers of the 41st Division Aviation, Washington National Guard, Felts Field, Spokane, are believed to have just completed a flying record superior to any other National Guard squadron in the country.

On June 10th, the squadron pilots completed flying the "weather hops" for the Department of Agriculture, after having started making these flights on July 19, 1934, during which time only 16 cancellations were made.

The flights, which averaged 16,000 feet altitude, were made voluntarily by the pilots, and without pay. During practically the entire time, the pilots took off about midnight, and landed about 80 minutes later. The total fly-

ing time was about 455 hours, 15 minutes.

The airplane used was a Douglas O-38E, equipped with an SCR-134 radio set, which made possible cloud and blind flying training. In every instance, except one, the pilots found it possible to return to Felts Field. In the exception, a storm blew in on Felts Field, making it necessary for the weather ship to land at Pasco for an overnight stay.

Ten weather flights were called off on account of all airplanes being on cross-country flights to Tennessee and Florida. Three cancellations were made by the Weather Bureau due to a broken aerometerograph instrument, and three other cancellations were made because of bad weather.

---oOo---

The many friends of Mrs. Horace Meek Hickam will be interested in learning that she is now residing at Mitchel Field, Hempstead, L.I., N.Y. It was with especial gratification that Air Corps personnel read of the action of the War Department in naming the important new tactical Air Corps field in Oahu "Hickam Field," in honor of her deceased husband. Funds in the amount of ten million dollars have been made available for the construction

of Hickam Field.

The Chief of the Air Corps is furnishing Mrs. Hickam with an engrossed copy of this War Department order, and with a copy of the proceedings of the Board of officers on the matter.

---oOo---

The House of Representatives recently passed a measure to fill up the Air Corps to authorized strength by authorizing the President to commission graduates of the Air Corps Training Center.

V-6800, A.C.

B I O G R A P H I E S

BRIGADIER-GENERAL FRANK M. ANDREWS

Brigadier-General Frank M. Andrews, Commanding General of the GHQ Air Force, was born in Hashville, Tenn., February 3, 1884. He graduated from the United States Military Academy in June, 1906, commissioned a second lieutenant and assigned to the 8th Cavalry. He also served as first lieutenant and captain with the 2nd and 18th Cavalry regiments prior to his detail in the Aviation Section, Signal Corps, in September, 1917. He accepted a commission as Major, Signal Corps (temp.) on September 22, 1917.

Following a period of duty, from September 26, 1917, to April 26, 1918, in the Air Division, Office of the Chief Signal Officer, Washington, D.C., he was assigned to the Flying School at Rockwell Field, San Diego, Calif., for duty as a student.

Completing his flying training in July, 1918, and receiving the rating of Junior Military Aviator on the 19th of that month, General Andrews was transferred to Arcadia, Florida, and placed in command of Carlstrom and Dorr Fields. In October, 1918, he was assigned to duty as District Supervisor of the Southeastern Air Service District. He was promoted Lieut.-Colonel, Signal Corps (temp.) February 8, 1918.

From March, 1919, to August, 1920, General Andrews was on duty in the Office of the Director of Air Service, Washington, D.C., where he served as Chief of the Inspection Division, as a member of the Advisory Board, and as a member of the War Plans Division of the General Staff.

Transferred to Germany for duty with the American Forces, General Andrews served as Executive Officer and as Officer in Charge of Civil Affairs until March 1, 1923, when he was returned to duty in the Office of the Chief of Air Service.

In June, 1923, General Andrews was transferred to Kelly Field, San Antonio, Texas, and served as Post Executive Officer until July 15, 1925. He was then appointed Commanding Officer of the 10th School Group. He also served as Assistant Commandant and Commandant of the Advanced Flying School at that station until September 1, 1927, when he was transferred to Langley Field, Va., for duty as student at the Air Corps Tactical School.

Following his graduation from the Tactical School in June, 1928, and from the Command and General Staff School, Fort Leavenworth, Kansas, in June, 1929, he was assigned to duty in the Office of the Chief of the Air Corps in Washington as Executive Officer of the Training and Operations Division. He was appointed Chief of that Division on January 7, 1930, and Executive, Office of the Chief of the Air Corps, on May 27, 1931.

He was promoted to Lieutenant-Colonel (permanent list) on January 13, 1930.

General Andrews received commendations for his excellent work as Chief of Staff of the Provisional Wing during the Field Exercises of the Air Corps in the State of California in 1930, and for the efficient manner in which he commanded a flight from San Antonio, Texas, to France Field, Panama Canal Zone, in 1932. He received a decoration from the Italian government for assisting the flight of the Italian Air Armada to the United States in 1933.

General Andrews graduated from the Army War College in 1933, and was ordered to Selfridge Field, Michigan, as Commanding Officer. On October 9, 1934, he was ordered to duty with the War Department General Staff.

In January, 1935, he was designated Commanding General, G.H.Q. Air Force, and he assumed command thereof with the temporary rank of Brigadier General on March 1, 1935.

---000---

COLONEL HUGH J. KNERR, AIR CORPS

Colonel Hugh J. Knerr, Air Corps, Chief of Staff of the GHQ Air Force, was born at Fairfield, Iowa, May 30, 1887. After graduating from high school, he received an appointment to the United States Naval Academy, graduating therefrom in June, 1908. During the period of three years and four months he served as a commissioned officer in the Navy, he was on duty a portion of the time as Chief Engineer of the U.S. Destroyer FLUSSER. He was also a member of the U.S. Navy Rifle Team.

Transferred to the Coast Artillery Corps, U.S. Army, as a second lieutenant, on November 8, 1911, he was promoted,

ed 1st Lieutenant on July 1, 1916; Captain, May 15, 1917, and Major, January 15, 1918.

On August 2, 1917, Colonel Knerr was transferred at his own request to the Aviation Section of the Signal Corps, and was placed on duty as a student at the Aviation School at Rockwell Field, San Diego, Calif. Upon the completion of his flying training he was rated a Junior Military Aviator as of December 13, 1917.

From February to June, 1918, Colonel Knerr served at Park Field, Millington, Tenn., as Officer in Charge of Cross-Country and Acrobatic Flying, also as V-6800, A.C.

Chief Engineer Officer. During June and July, 1918, he served as Chief Engineer Officer at Gerstner Field, Lake Charles, Louisiana.

Transferred to duty in Hawaii, he was assigned to the command of the 6th Aero Squadron and Luke Field, T.H. He also served as Department Air Service Officer and Disbursing Officer during his tour in that insular possession from August, 1918, to May of the following year.

Relieved from detail to the Air Service, Colonel Knerr returned to the Coast Artillery Corps and served at Fort Barrancas, Florida, until February, 1922, when he was re-detailed to the Air Service and assigned to pursue a refresher course in flying at the Primary Flying School at Carlstrom Field, Arcadia, Fla. Following his graduation from that school, he completed the course at the Advanced Flying School at Kelly Field, Texas, graduating December 18, 1922, and receiving the rating of "Airplane Pilot."

From February, 1923, to August, 1925, Colonel Knerr was on duty at the Fairfield, Ohio, Air Intermediate Depot as Commanding Officer of the 88th Observation Squadron. His next assignment was that of student officer at the Air Corps Tactical School at Langley Field, Va. He graduated from this School in June, 1926, and from the Command and General Staff School, Fort Leavenworth, Kansas, in June, 1927.

Colonel Knerr was assigned as Commanding Officer of the 2nd Bombardment Group at Langley Field, Va., on July 1, 1927. On several occasions he led this Group on long-distance cross-country flights, the most notable of which was the one to Los Angeles, Calif., and return in September, 1928. He also played a prominent part in Air Corps maneuvers held in different years during the period he was in command of the above-named organization.

Assigned as a student at the Army War College, Washington, D.C., in August, 1930, he graduated therefrom in June of the following year, and was then assigned to duty at the Materiel Division at Wright Field, Dayton, Ohio, as Chief of the Field Service Section, a position he occupied until his appointment on March 1, 1935, as Chief of Staff of the GHQ Air Force, with the temporary rank of Colonel.

During April and May, 1933, Colonel Knerr participated in the Antiaircraft - Army Air Corps Exercises in Ohio and adjoining States. He was a member of the Air Corps Expedition of ten B-10 Martin Bombers which flew from Washington, D.C. to Fairbanks, Alaska, and return, July - August, 1934. Colonel Knerr piloted one of the Bombers and was flight commander of the second of the three flights into which this Expedition to America's most northern possession was organized.

---oOo---

WASHINGTON GUARDSMEN NOW RADIO EQUIPPED

All airplanes of the 41st Division Aviation, Washington National Guard, Felts Field, Spokane, are now equipped with two-way radio communication.

This was made possible by delivery of five new type sets, four of which are the SCR-AA-185 airplane sets, and one SCR-AA-146 ground station set. The airplane sets were installed in three O-38E's and one O-38, under the direction of 1st Lieut. Charles O. Holter, while the two old SCR-134 sets were installed in O-38B's.

The installation of the sets was completed at this writing and before the officers and men had received lectures on the operation of the new equipment.

---oOo---

DR. AMES PRESENTED THE LANGLEY MEDAL

On May 21st, at the invitation of the regents and Secretary of the Smithsonian Institution, Brigadier-General A. W. Robins, Majors E.M. Powers, J.G. Taylor and Captain H.Z. Bogert, Air Corps, and Theodore dePort, aircraft engineer, were present at the presentation by the Chancellor, Chief Justice Hughes, of the Langley Medal for Aeronautics to Dr. Joseph S. Ames, Chairman of the National Advisory Committee for Aeronautics.

CONGRATULATIONS TO DEPARTMENT OF JUSTICE

The personnel of the Air Corps salute their brothers in arms in the Department of Justice and the various State and Municipal forces concerned for their splendid work against public enemies more insidious in their attacks than any foreign foe could be. The promptness with which two principals in the Weyerhaeuser abduction gang were run to earth and captured, and the third identified and closely pursued, reflects the greatest credit upon these splendid guardians of our homes and families.

We congratulate you - men of action! May every success attend your further efforts.

---oOo---

A Civilian Conservation Corps worker, Robert Flylik, of Tyndall, S.D., suffering from double pneumonia, probably owes his life to the assistance of Captains Albert W. Stevens and Orvil A. Anderson, Air Corps, who interrupted their stratosphere flight preparations to send four cylinders of compressed oxygen to the Hot Springs Veterans' Administration Hospital in answer to the call of physicians for oxygen. After the patient received the oxygen treatment his temperature dropped and physicians said he was improving.

V-6800, A.C.

TEMPORARY PROMOTION OF AIR CORPS OFFICERS

To Major

Captain John E. Upston assigned as commander, Headquarters Squadron, GHQ Air Force, Langley Field, June 12, 1935.

Captain Charles P. Prime assigned as commander, 1st Bombardment Squadron, Mitchel Field, N.Y., June 7, 1935.

Captain Barney Giles assigned as Intelligence and Operations Officer, 2nd Bombardment Group, Langley Field, June 12, 1935.

To Captain

1st Lieut. Lilburn D. Fator assigned as Flight Commander, 2nd Obs. Squadron, Nichols Field, P.I., June 4, 1935.

To 1st Lieutenant

2nd Lieut. Thetus C. Odom assigned to command of 2nd Photo Section, Langley Field, Va. June 7, 1935.

OFFICERS RELIEVED FROM TEMPORARY RANK

Captain Milton J. Smith, from Brooks Field, Texas, July 5, 1935, to Schoen Field, Fort Benjamin Harrison, Ind.

Lieut.-Colonel Harold M. McClelland and Captain Donald D. FitzGerald, from Rockwell Field; Majors W.C. Morris and Ira C. Eaker, from March Field, July 26, 1935, to Air Corps Tactical School, Maxwell Field, Ala.

Captain Stewart W. Towle, Jr., from duty with 21st Obs. Squadron, Bolling Field D.C., June 5, 1935, to Office Chief of Air Corps.

Major Hugh C. Downey, from Mitchel Field, N.Y., June 26, 1935, to Air Corps Training Center, Randolph Field, Texas.

The following changes were made in the assignment of officers temporarily promoted, these officers retaining temporary rank:

Major Earle J. Carpenter from commander, 1st Bomb. Squadron, to Supply Officer, Station Complement, Mitchel Field, N.Y.

Captain August W. Kissner from 66th Service Squadron to Engineer and Armament Officer, 4th Composite Group, Nichols Field, P.I.

Captain George W. Mundy from 2nd Observation Squadron to Engineer Officer, 66th Service Squadron, Nichols Field, P.I.

CHANGES OF STATION: To Office of the Chief of Air Corps, Washington: Colonel Chalmers G. Hall, from duty with Organized Reserves, 2nd Corps Area, Newark, N.J. - Major Leslie MacDill, from Bolling Field, D.C. - Major Rosenham Beam from duty as Instructor, Cavalry School, Fort Riley, Kansas. - Captain Lowell H. Smith, upon completion of course of instruction at Command and General Staff School at Fort Leavenworth, Kansas.

To Langley Field, Va.: Captain John R. Drumm from Kelly Field. - 2nd Lieuts. John E. Barr and Joseph B. Zimmerman from Philippines.

To Maxwell Field, Ala.: 1st Lieut. Marion Huggins, from duty with Flight B, 16th Obs. Squadron, Ft. Benning, Ga. - 1st Lieut.

Clayton E. Hughes, 2nd Lieuts. John B. Ackerman and Edward J. Hale, from Advanced Flying School, Kelly Field. - Captain Peter E. Skanse, upon completion of course of instruction at Air Corps Tactical School. - Captain Levi L. Beery, Maxwell Field, for duty as student at Tactical School, that station.

To Randolph Field, Texas: Captain Mark R. Woodward from Langley Field to duty at Air Corps Training Center.

To Brooks Field, Texas: Captain John C. Kennedy, from Crissy Field, Calif.

To Bolling Field, D.C.: 1st Lieut. William A. Matheny. Previous orders revoked.

To Chanute Field, Ill.: 1st Lieut. John J. Keough, from Advanced Flying School, Kelly Field.

To Barksdale Field, La.: Captain LeRoy A. Walthall, from duty with Organized Reserves, 9th Corps Area, San Francisco, Calif.

To Scott Field, Ill.: 1st Lieut. Haynie McCormick, from Fort Sill, Okla.

To Fort Riley, Kansas: Major Howard J. Houghland, Langley Field, for duty as Instructor at Cavalry School.

To Chicago, Ill.: Captain Charles Douglas, from Tactical School, Maxwell Field, to duty as Instructor, A.C., Illinois National Guard.

To Los Angeles, Calif.: Captain Philip Schneeberger for duty as A.C. Procurement Planning Representative, Fourth Zone, from similar duty at San Francisco District.

To Hawaiian Department: Captain Charles E. Branshaw from A.C. Tactical School, Maxwell Field. - 1st Lieuts. Donald D. Arnold, Robert E. L. Pirtle and 2nd Lt. Daniel A. Cooper from Signal School, Fort Monmouth, N.J.

To Panama Canal Department: 1st Lieut. Frederick W. Ott and 2nd Lt. John A. Feagin, from Signal School, Fort Monmouth, N.J.

To Philippines: 1st Lieut. Edward H. Porter from Signal School, Fort Monmouth, N.J.

PROMOTION: To 1st Lieut., rank May 17, 1935 - 2nd Lieut. Thomas L. Thurlow.

RETIREMENT: 1st Lieut. Eyrle G. Johnson, May 31, 1935; 1st Lieut. Robert M. Kraft, May 31, 1935.

RELIEVED FROM DETAIL TO AIR CORPS: 2nd Lt. Eugene H. Cloud, to 25th Infantry, Fort Huachuca, Arizona.

TRANSFERRED TO AIR CORPS: 2nd Lieut. Lawrence B. Kelley, Field Artillery, rank from June 13, 1933.

---oOo---

Master Sergeant Frank G. Bilkor, 61st Service Squadron, Mitchel Field, N.Y., was appointed a Warrant Officer, Regular Army, June 1, 1935. He remains on duty at Mitchel Field.

---oOo---

On June 11, 1935, Captain Cornelius W. Cousland, Air Corps, was relieved from assignment, duty and temporary rank with the Panama Air Depot, France Field, and ordered to report to the Commanding General, Panama Canal Department for duty with Air Corps and to Governor of Panama Canal for additional duty.

AIR FORCE ORGANIZATION OF FOREIGN COUNTRIES

British Royal Air Force

The control of the Royal Air Force is vested in the Crown.

The Secretary of State for Air, the Marquess of Londonderry, is the head of the Air Ministry and President of the Air Council, and is charged with control over military aviation and over civil aviation through his Director-General of Civil Aviation. Military Aviation is separate and distinct from the Army and Navy, the Air Ministry holding a coordinate rank with Admiralty and the War Office.

There are no units actually allocated to the Army. The Army Cooperation Squadrons work with the Army on call.

The Fleet Air Arm is that part of the Royal Air Force allocated to the Navy. In general, the Fleet Air Arm is trained and controlled by the Royal Air Force when on land. When on ships or carriers, the units of the Fleet Air Arm are under naval control. Approximately 70% of the pilots and all observers in the Fleet Air Arm are drawn from naval personnel.

The Royal Air Force at present consists of:

Home Defense Force	43 Sqdns.
Army Cooperation Squadrons (home)	5 "
Flying Boat Squadrons (home)	5 "
Communications Squadrons (home)	1 "
Foreign Stations	24 "
Fleet Air Arm	16 "
Total - - - -	94 "

The Branches of the R.A.F. include the General Duties Branch, the Accounting, Medical, Legal and Chaplains Branches.

The General Duties Branch is the combat organization and consists of personnel (commissioned and enlisted) for combat duty. There are approximately 2700 pilots in the Royal Air Force, of which about 400 are enlisted pilots.

The Squadron is the basic tactical unit. Higher organization contemplates the Wing and Group. The Group consists of two or more Wings, and the Wing, two or more Squadrons. None of the higher organizations are at home at present, but in India there are one Group and three Wings.

A considerable expansion of the R.A.F. is contemplated for the near future to meet changed conditions in Europe.

France

The Air Ministry. The Air Forces are under the authority of the Air Minister. The Minister is advised by the Supreme Air Council and is assisted by the Inspector-General of the Air Forces, who is the Vice President of the Supreme Air Council; by the Chief of the General Air Staff, and by the heads of the various military Directorates of the Central Air Administration.

The Air Ministry has both a civil and military character. It includes: the Minister's

Cabinet, the General Staff of the Air Forces, the Directorate of Air Materiel, the Directorate of Military Personnel, of Air Administration Audit, and of Construction.

The Air Army. The military aviation is called the "Air Army," and is divided into three categories; that operating directly under the Air Minister (about 1/5), that attached for work with the army (about 4/5) and the squadrons detached for service with the Navy.

Territorially, it is distributed among three air regions in France and a region in North Africa, with units detached for service in the colonies.

The formations include: Air Forces in the home country, in Northern Africa and the theatres of operation abroad and Colonial Aviation.

Troops:

Aviation - a varying number of squadrons, which are organized into groups, wings and brigades, attached in principle to an air base - mobilization centers.

Lighter-than-Air - a varying number of lighter-than-air companies organized into battalions and half brigades.

Strength - Officers, 2,127; men 29,800; materiel, approximately 3,500 planes of all types, combat, training, school, etc.

Italian Air Force

The air force comprises all the military air forces of Italy and her colonies.

The supreme authority responsible for the discipline and technical and administrative organization of the air units and establishments serving the general needs of the Royal Air Force is the Air Minister, who exercises his powers through his central organs, through the Chief of the Air Staff and through the commanders of the territorial air zones.

The Regia Aeronautica is organized into the Aeronautical Arm, Engineering Corps and the Commissariat Corps.

The combat forces of the Regia Aeronautica, which includes all military aircraft, are as follows: Aerial Army, Aerial Units assigned to the Army, Aerial Units assigned to the Navy, and Colonial Aviation.

The basic tactical unit is a squadron, two or more of which form a wing; two or more wings, a group; two or more groups an aerial brigade; two or more brigades an aerial division; two or more divisions form the Aerial Fleet or Air Force.

The squadrons of each class of aviation in the Regia Aeronautica are as follows:

Pursuit	-	35 squadrons
Reconnaissance	-	38 squadrons
Bombardment	-	34 squadrons

---oOo---

NOTES FROM AIR CORPS FIELDS

Hamilton Field, Calif., June 5th

Captain Carlyle H. Ridenour became a Major on May 29th, taking over the duties of Major R.P. Reese as Operations Officer, 7th Bombardment Group. Major Reese was assigned as Commander of the 69th Service Squadron, relieving Major Guy Kirksey, now functioning as Station Inspector.

Recent War Department orders also conferred on Captain Delmar H. Dunton and 1st Lieut. Frederick L. Anderson the temporary grades of major and captain, respectively. Capt. Anderson was recently awarded the Distinguished Flying Cross for remaining in a burning plane while flying over San Francisco long enough to insure it crashing into San Francisco Bay, thereby avoiding possible loss of life and damage to property. He jumped with his parachute and was rescued by Navy personnel. He will soon be officially decorated with the medal by the Corps Area Air Officer, acting as representative of Major-General Paul B. Malone, 9th Corps Area Commander.

Pvt. William W. Smith, Station Complement, was recommended for West Point. To show his scholastic ability, he will first attend the West Point Preparatory School at the Presidio, from which he may go to the Military Academy should he, in competition with other applicants at this preparatory course, demonstrate sufficient proficiency.

1st Lieut. Edward W. Suarez, group adjutant, matched the speed of a fast airplane against death as he flew to the bedside of his father, who was reported critically ill.

St.Sgt. Axel Bishop, formerly mess sergeant at the Station Hospital, was promoted warrant officer and assigned as assistant to the Air Corps Supply Officer.

Major John M. Davies, Commander of the 9th Bomb. Squadron, is now on two months leave of absence, Captain Donald J. Keirn temporarily assuming command.

Majors Robert C. Murphy, Lewis R.P. Reese and 1st Lieut. Richard T. King acted as board to investigate the causes of the death of 2nd Lieut. Edgar W. Root and Pvt. 1 cl. Guy F. Porter.

Major Robert C. Murphy, flight surgeon, spoke on the "Significance of Memorial Day" before the high school assembly at San Rafael on May 29th. At their civic program on Memorial Day, he read Lincoln's Gettysburg Address.

Wing maneuvers are scheduled for June 17-20, according to a report at this station. The municipal airport at Mines Field, Los

Angeles, has been indicated as the rendezvous. The squadron maneuvers of the 11th Bombardment Squadron, which were originally set for June 10th, have been postponed until June 24th, so that the wing maneuvers can be carried out. Major Arthur G. Hamilton, leader of the 11th, expects to fly on the latter date with 13 planes and 13 pilots to service-test his organization with war strength equipment and planes.

A plaque in honor of Captain Howard B. Nurse, construction quartermaster at Hamilton Field, was placed in the Officers' Club at Hamilton Field. Should Capt. Nurse be detailed to Hawaii on the contemplated \$11,000,000 project, the plaque will remain here as a memorial to his services.

St.Sgts. Dominic Dennis and George S. Kreitz sailed for Honolulu June 11th for a tour of service in the Hawaiian Department.

St.Sgt. Harry Kramer, Station Complement, functions as the personnel sergeant major at Hamilton Field. His assistant is Corporal J.J. Moran.

The post library at Hamilton Field under the guidance of Chaplain Stanley J. Reilly is represented with the works of the great writers of literature, Scott, Dickens, Twain and John L. Stoddard. The latest count showed over 1,070 volumes. Pvt. Jack W. Miller, 69th Service Squadron, is the librarian.

The senior classes in the Ross Grammar School visited here last Saturday, 34 children taking delight in the huge bombers of the 31st Bombardment Squadron as Master Sgt. Thomas Randles and Sgt. Lewis explained their intricacies.

San Antonio Air Depot, Duncan Field, Texas.

The monthly Control Area supply and engineering conference at this Depot was held on June 4, with an attendance of 25, including visiting personnel and representatives from the Air Corps stations in this Control Area.

Messrs. Wm. Ewing, Chief, Aircraft Maintenance & Supply Branch, W.F. Longletz, Chief, Engine Maintenance & Supply Branch, Field Service Section, Materiel Division, Wright Field, Ohio, were visitors here May 29 to June 4, on temporary duty tour of various Air Corps activities through the West to confer on field problems and conditions.

The S.A.A.D. Baseball Team, under the coaching of Major R.V. Ignico and the management of Mr. Julius Glau, is forging ahead in its effort to keep up with our record in this field in former years. The team is now runner-up for the championship of the six-team City

Major League of San Antonio, holding second place and but half a game behind the leading team.

Lieuts. (J.G.) J.V. Peterson (pilot) and Morrison and Lieuts. (J.G.) N.F. Carton (pilot) and J.W. Boundy, U.S. Navy, flying two Naval Land Scout planes, visited this Depot May 22-24, en route from the Naval Air Station, Pensacola, Fla., to San Diego, Calif., on a tour of various Government and civil aircraft engineering establishments.

Major John Van O. Weaver, Air-Res., San Antonio, began a 14-day active duty tour at the Depot, beginning June 3d. Major Weaver is Sales Engineer for the General Electric Company, and is active in civil aviation affairs. This is his third tour at this Depot.

Major S.F. Landers and Captains A.C. Kincaid, S.M. Umstead, and L.J. Maitland, accompanied by Staff Sgt. S.P. Riales, Sgt. Wm. A. Stryker, and Evt. AM2cl. J.R. Cross as mechanics, of Maxwell Field, Ala., flew one B-4, two B-4A's, and a C-14 transport in to the Depot May 30, for overhaul of the B-4's, returning June 2d in the transport.

Captain J.T. Morris, Engineer Officer, accompanied by Mr. E.G. Lupton, Shop Superintendent, of the Rockwell Air Depot, Coronado, Calif., arrived at this Depot June 1st on an extensive air tour of the Air Depots and certain aircraft factories in the East, to confer on shop methods and new equipment.

Fort Sill, Oklahoma, June 4, 1935.

During the past two weeks rain has dampened activities at Post Field to a very marked degree. Routine missions with the Field Artillery School and War Department Training Missions were carried out when the weather permitted.

On May 21st and 27th, Student Observation Flights from Kelly Field visited Fort Sill, and on June 1st a Student Bombardment Flight arrived.

The Air Corps baseball team has won six, lost none, and has two remaining games to play. If Sgt. Igmondson can perform the "Iron Man" act and win these two and two out of three in the championship series, the Staff Troops Trophy is in the bag.

Langley Field, Va., June 4th.

The BT-2B airplanes formerly utilized in the Instrument Flying Section have been assigned to tactical organizations. They are averaging 7 flying hours per day.

Among the higher record bombers this month are Captain Dale D. Fisher with a score of 1943 out of a possible 2000. Captains T.S. Power, William Bentley and Lieut. W.B. Inman were in the high 18 hundreds.

Lieut. Col. W.R. Weaver, Chief Inspector, G.H.Q. Air Force, inspected the 2d Bombardment Group in all phases of its activities. Tactical missions, including squadron bombing, were performed.

Flying Cadet Scott was transferred at his own request to Barksdale Field, La.

41st Division Aviation, Washington Nat'l Guard.

Six Douglas Observation airplanes were scheduled to leave Felts Field, Spokane, at 5:30 a.m. June 10th, to participate for the first time in division aviation training with National Guard troops from Washington, Oregon and Idaho, commanded by Adjutant General White, of Oregon, Division Commander. It will be the first division camp since the organization of the 41st Division Aviation. More than 6,000 Guardsmen from the three States will be encamped for two weeks.

An elaborate training schedule with other arms of the service has been planned by the Division Aviation, commanded by Major Robin A. Day, Air Corps. Captain Gardner, Instructor attached to the Air Corps Reserve, Boeing Field, Seattle, is slated to be air officer on the staff of General White. Captain E.B. Bayley, Instructor attached to the California National Guard Squadron, will be Inspector. Captain Gardner will fly one of the California squadron planes to Fort Lewis, for use by the 41st Division Aviation, which will have seven ships for the camp.

An operations schedule has been approved by Major Day which will keep all airplanes in the air from 7:00 a.m. to 5:00 p.m. Practically every pilot going to camp will have flown 180 hours so far this fiscal year, and it is believed the general average will be more than 205 hours by the time camp ends.

Troops of the Division Aviation were scheduled to entrain for camp at 8:00 p.m., June 9th and to arrive at the Fort Lewis airdrome at 9:00 a.m., June 10th, the squadron formation across the State reaching camp at the same time.

Aerial gunnery missions, front and rear gun firing for record on the tow target will start at 1:00 p.m., on the first day of camp. An hour's flight from Fort Lewis to Illwaco, on the Pacific Coast, is necessary to reach the range. Tow target gunnery will continue for six days, with two flights each day, until all pilots and observers have fired.

Ground target firing for record will start the second week of camp, with the target located on the Fort Lewis airdrome. Both front and rear guns will be fired on the ground target.

In order to insure the Division Aviation having plenty of cooperative missions of all kinds, letters were sent to commanders of all other arms of the services several weeks ago, asking that the Division Aviation be definitely included in their schedules. As a result, several problems will be conducted in artillery fire adjustment. Practically every day there will be observation, communications and photographic missions with the two Infantry regiments.

Cars from the motor transport section will provide the transportation for the Division Aviation bivouac, to be held at Chehalis, V-6800, A.C.

Wash., about 40 miles distant from the Fort Lewis airdrome. All flying equipment and the ground radio station will be taken to the Chehalis Municipal Airport, where Captain Bayley will conduct his field inspection of personnel.

From bivouac, all airplanes will leave Chehalis on June 14th on a cross-country flight to San Diego, returning to Fort Lewis on Sunday, June 16th. Seven airplanes will be in the squadron formation, which will spend Saturday night, June 15th, at Hamilton Field.

The real problem of the camp will start on Thursday, June 20th, when all troops of the Division will enter the field for the Division problem. The advance troops will start at 3:30 a.m., when the Division Aviation will start its observation, and will continue on the alert until Friday night, June 21st, when the problem ends.

Ground forces will move into position for their attack under the cover of darkness. Both the Blue and Red forces will have airplanes assigned for night observation. In the operations headquarters, a situation map will be kept up to the minute, and all pilots and observers making complete reports after each mission.

The Review by Governors - there will be three - from Washington, Idaho and Oregon, will take place on Sunday, June 23rd, on the Fort Lewis parade ground.

Details have been worked out where all airplanes will be available for flying every day from 7:00 a.m. to 5:00 p.m. Regular checks will be made by crews after the flying has been completed each day.

---oOc---

Under special orders of the War Department, just issued, two boards of Air Corps officers were appointed, to meet at the call of the president thereof at Wright Field, Dayton, Ohio, on a date to be set by the Chief of the Air Corps Materiel Division, the first board to appraise the designs submitted for bombardment airplanes and the second to appraise the designs submitted for single and two-seater pursuit airplanes.

Officers designated on the first board are Lieut.-Col. Harold Lee George, Maxwell Field, Ala., Majors John F. Whiteley, Langley Field, James A. Woodruff, Captains F.O. Carroll, H.Z. Bogert, James M. Gillespie and 1st Lieut. Leonard F. Harman, of Wright Field, Dayton, Ohio. Those designated on the second, or pursuit ship board, are Majors Claire L. Chennault, from Maxwell Field, Ala.; John F. Whiteley, Langley Field, Va.; Captain Carl F. Greene, 1st Lieuts. Dudley W. Watkins, Roscoe C. Wilson and Benjamin S. Kelsey, from Wright Field.

LIBRARY NOTES

Some of the More Interesting Books
and Documents
Recently added to the Air Corps Library

A 00 U.S. 54. Two years of emergency conservation work (Civilian Conservation Corps), 1935.

A 40/83. Italian organization for the protection of flight. 1934. 23p. Trans. from L'Aerotecnica, Dec. 1934. Takes up operation of radio-meteorological services in Italy.

B 63/26. The air medical services; a comparative study of the functioning of the air medical service in various countries. Jan. 5, 1933. 36p. Trans. from the French.

C 21/100. The Air Corps, by Major Robert C. Candee. April 18, 1935. 24p. Lecture delivered before the Engineering School at Fort Belvoir, Va.

C 21/101. Air Corps in coast defense, by Major Robert C. Candee. May 15, 1935. 12p. Lecture delivered before the Engineer School at Fort Belvoir, Va.

C 21/102. Purpose of the Air Corps, by General Oscar Westover. April 27, 1935, 8p. Talk before U.S. Chamber of Commerce.

C 71.7/3. Instructions for practice, anti-aircraft artillery, Great Britain, War Office. 1935. 27p.

C 71.6 U.S. 66. Promoting and regulating aviation safety, by Eugene L. Vidal. 1935. 5p. Presented at the aeronautical session, 6th Annual Greater New York Safety Conference.

D 52.41/45. Installation of steam turbine plants on airplanes, by S. Shapiro, May 21, 1935. 15p. Takes up altitude, super airplanes, economy, dependability, safety, noiselessness and simplicity.

D 52.41/52. The Winter Operation of Aero Engines, by Alan Ferrier. April, 1935. 9p. Reprint from S.A.E. Transactions.

616.97/G98. The residual effects of warfare gases, by H.L. Gilchrist, 1933. 93p. Takes up Chlorine and Mustard gases.

621.43 J89h. High Speed Diesel Engines, with special reference to automobile and aircraft types; an elementary textbook for engineers, students and operators, 1933. 248 p.

629.142 K 45. Mechanics of Flight, by A.C. Kermode, 1932. 207 p.

629.18 Al 8. Aluminum in aircraft, by Aluminum Company of America, 1930. 159 p.



TECHNICAL INFORMATION
and
ENGINEERING NEWS

INSPECTION DIVISION, OFFICE OF THE CHIEF OF THE AIR CORPS

The following difficulties have been reported in recent Unsatisfactory Reports:

Airplane Type P-26A: Tube Assembly. Blast, .30 caliber, Part No. 3-4729.

Breakage of Support Assemblies, blast tube, Part No. 21-4328, is occurring after approximately 5 hours flying time with blast tubes installed.

Caused by vibration of the blast tube due to the loose fit of this tube over the barrel jacket.

A "vee" shaped slot, $\frac{1}{4}$ " at open end and approximately 2" long was cut in a blast tube at the barrel jacket end. On each side of this slot, a small piece of 3/16" tubing was welded to receive a #10 bolt to secure the blast tube to the barrel jacket.

This blast tube was installed in P-26A airplane No. 33-122 and has been installed for approximately 35 hours. A burst of 65 rounds has been fired through the gun. Thus far, this installation has proven satisfactory.

YB-10 Martin Bomber. Linen on leading edge of left center panel has pulled out of the wire due to the deterioration of the linen. This was evidently caused by oil and gas being spilled when servicing and oil getting on the panel in flight.

It is recommended that a light strip of aluminum be extended from the trailing edge of the metal panel to about the first row of stitching on the linen panel.

Note by Station Engineering Officer: This office recommends that change outlined in this Unsatisfactory Report be prescribed for installation on all airplanes of this type. It is believed that this should be accomplished as a temporary measure only. It is further recommended that the part of the under surface of the fabric covered trailing edge affected should be metal covered throughout with dural sheet of a suitable thickness.

Reply to U.R.: "It has been found that at least a part of this deterioration is due to acid from the battery drain being sprayed on the fabric covering. Instructions and drawings will soon be issued calling for a change in the battery drain which should correct this condition.

In regard to your recommendation that the fabric covering be replaced with steel covering, this change will probably be made when the airplanes are given overhaul. Until the

metal covering is installed, it is requested that the fabric be coated with fire resisting enamel to reduce the possibility of fire from overflowed gasoline and accumulated oil.

In cases where the fabric becomes deteriorated to the extent that replacement is necessary, care should be exercised to allow two inches of cloth to overlap as shown on Section F-F of Drawing P-103017."

Douglas O-38 Airplane: The alomite filler and the drain cock which is used to test the level of the fluid in Oleo Strut, Part #085525-1 on airplanes of the O-38 and O-38B series have given considerable trouble at this station by leaking.

The mixture of castor oil and alcohol has been extremely detrimental to painted and doped surfaces and it has been found practically impossible to remove this from lacquered and doped surfaces without removing the lacquer and the dope.

This trouble has been corrected at this station by installing a Zerk filler with a screw cap which cannot leak, and a level tester made out of a union with a positive screw cap made from the cone and nut of the union. Both caps have been built to a round nose by braising and have been drilled and safetied together.

Reply to U.R.: "The changes made to prevent leaks at the points in question are satisfactory.

As a matter of information, a quantity of leak-proof alomite lubricators will soon be procured."

P-26A Airplane: Aileron Swing Support Assembly, Part No. 21-2095, and Aileron Swing Spacer, Part No. 21-2478.

Spacer appears to be turning in bracket and wearing, resulting in excessive play.

Airplane new. Time in service, 303 hours. Cause of this condition undetermined. No repairs or modifications made. No recommendations. Parts continued in service.

Reply to U.R.: "The design of the mechanism in question is such that the spacer is staked at manufacture to the aileron swing support assembly. This practice appears to be satisfactory, and since no previous trouble with rotating has been encountered, it is considered logical to assume that the trouble is due to faulty staking at manufacture. It is requested that the spacer in question be se-

V-6800, A.C.

curely staked to the support assembly without removing the assembly from the rear spar hinge if this is possible. If additional reports on this trouble are received, consideration toward changing the staking method to a more positive means of attachment will be given consideration."

Hub Assembly, Propeller.
AC - 31-428-P.

C-24 Airplane,
Air Corps No.
32-287.
R-1820-E Engine,

Air Corps No. 32-384.

During 40-hour inspection, propeller was found to be slightly loose, by the 56th Service Squadron. Propeller could not be tightened with or without spacer installed, so it was turned over to the Propeller Department for inspection.

Inspection of propeller hub, Part No. 30-707, revealed that splines were .019" larger than hub which was drawn from stock.

Propeller shaft was not damaged and replacement hub tightened without difficulty.

The following defects were noted during recent technical inspections:

- Y10-40B - Carburetor line drain loose at fitting. Excessive play, left elevator flettner.
- PT-3A - Hole in cowling which supports air intake stack worn oversize. Screen in air intake stack is torn. All aileron control linkage pins worn. Rubber grommets on oil line drain worn. Defective hose on oil pressure line.
- O-43A - Radius of bend, Prestone temperature line too small. Battery drain line disconnected. Flettner control linkage worn. Loose connection, main line switch. Play in front control stick assembly. Side play, wobble pump handle.
- O-43A - Technical Order 01-1-4 not complied with at solenoid switch on starting motor. Lock nut loose, shutter control rod.
- O-43A - Fuel line from rear carburetor not marked. Fuel line from main tank to fuel cock shut-off defective. Technical Order 08-5-1B not fully complied with.
- O-43A - Fuel line from carburetor to C-1 strainer not marked as required by Technical Order 01-1-51.
- PT-3A - Elevator control cables too loose.
- PT-3A - Aileron control cable slightly loose. Horizontal stabilizer rear support loose.
- BT-2A - Propeller badly nicked.
- O-25C - Horizontal stabilizer trunnion worn.
- PT-3A - Right gas gauge leaks. Oil tank cover soaked with oil (tank apparently leaking). Vertical stabilizer loose.
- O-35 - Carburetor drain line, left engine, badly bent. Hose connection on

Prestone line from expansion tank to right bank outlet, on left engine, defective. Oil radiator cowl on left engine cracked. No tags on fire extinguisher showing date of inspection.

- O-35 - Oil line hose connections defective. Fire extinguisher leaking.
- O-35 - Safety wire of Cuno strainer broken. Carburetor screen on left engine broken. Fuel line from carburetor to C-1 strainer, left engine, not marked. Technical order 08-5-1 not fully complied with.
- O-35 - Battery mountings not painted with acid proof paint. Weld cracked on member housing, upper end of right oleo leg. Hose connection on fuel line from C-1 strainer to fuel pump defective.
- B-7 - Technical Order 01-1-25 not fully complied with. Zerk fitting missing on right engine. Lower retaining nut on fuel pump, flexible drive shaft on left not properly safetied.
- P-26A- Sediment and flakes in gas tank.
- P-26A- Ring cowl loose and not safetied properly.
- C-14 - Sediment in gas tanks.
- OA-4 - Elevator stop adjustment not set.
- B-5A - Compass not swung with radio on. Lens broken, left landing light.
- BT-2B- Inner aileron strut fitting loose.
- BT-2B- Stabilizer adjusting mechanism badly worn. Inner aileron strut fitting worn.
- BT-2B- Rubber tubing, battery box drain, deteriorated.
- BT-2A- Sediment in main fuel tank.
- BT-2A- Leaking gas around carburetor butterfly valve shaft.
- BT-2C- Leaking gas around carburetor butterfly valve shaft.
- A-12 - Flare door latch broken. Left rear wing butt strut cuff cracked.
- A-12 - Rudder control cable frayed.
- A-12 - Tail wheel control cables frayed. Screw out of vertical fin fairing, right side.
- A-12 - Rear rudder stop needs adjustment.
- BT-2BI- Slight leak in fuel relief valve and 3-way valve.
- A-12 - Starter terminal loose. Ears broken, filler and cap (oil cap safetied).
- A-12 - Ball socket, stick control, loose.
- A-8 - Gas leak at fuel pump (2 reports).

The following difficulty has been reported in recent Unsatisfactory Report:

Type D-2 Batteries: It is very difficult to remove Type D-2 batteries from battery containers, Drawing #0168774 without tearing the name-plate off the side of the battery. The name-plate is secured to the side of the battery with round head screws which catch on the 1/8" wood liner of the battery box. It is recommended that Specification 70-22, be revised to specify that the name-plates be fastened to the end of the batteries instead of the side. Since the handles are fastened on the ends no loss of space will be encountered.

ered by mounting the name-plates below the handles.

Reply to U.R.: "Action is being taken to revise Specification 70-22-B to specify the nameplate be attached to the end of the battery instead of on the side. If desired, the name-plate on the batteries installed in aircraft and in stock, may be removed and reinstalled on the end, as it is merely secured in its present location by four screws."

The following difficulty had been reported in recent Unsatisfactory Report:

Throwing Oil from AC No. 33-656:
Breather, No Compression, & Excessive Oil Consumption, P-1690-11 Engines. Engine throwing oil out at both breathers and had absolutely no compression on No. 9 cylinder, rasping noises in Nos. 3 and 4 cylinders.

This engine has been in service 105:10.

Cause of unsatisfactory condition undetermined.

No recommendations.

AC No. 33-639:

Engine throwing oil from both breathers, lost approximately 400 R.P.M. in flight. Ground test showed no compression on Nos. 2, 6 and 9 cylinders.

This engine had 84:35 flying time.

Cause of unsatisfactory condition undetermined.

No recommendations.

AC No. 33-631:

Replacement of R-1690-11 engine AC. No. 33-631, installed in YB-12 airplane, A.C. No. 33-161, due to excessive oil consumption of the engine. Excessive amount of oil was passing through oil cylinders and causing misfire of the engine.

Reply to U.R.: "The five piston and ring assemblies forwarded by the Rockwell Depot in connection with these reports have been examined. All the pistons were found to be slightly scored and a number of the rings stuck. One of the pistons was found to be badly burned under the compression rings. It is believed that the increased ring clearances now recommended, together with the increase in the size of the crankshaft oil jet, should tend to reduce the number of failures of this type.

"It is imperative, however, that the operating limits on manifold pressure and cylinder temperatures be carefully observed during ground and flight operation of these engines as no piston and ring assemblies yet devised will stand up when high-output engines of this type are operated above their normal rating. It is also highly important that current instructions regarding the use of the mixture control be carefully observed at all times and particularly that the mixture control must not be leaned out to the point where reduction in R.P.M. is noted.

---oOo---

MATERIEL DIVISION, WRIGHT FIELD, OHIO.

Take-off and Landing Characteristics Recorded by New Method

A photographic method for recording the take-off and landing characteristics of an airplane has been developed. The take-offs and landings are made over a carefully laid out course, and an especially appointed moving picture camera is used to record the successive positions of the airplane at certain intervals of time, simultaneously recorded. The picture obtained gives the history of the distance in height in relation to time from which all the characteristics pertaining to the take-off and landing can be determined. The practicability and accuracy of this method have been demonstrated on many occasions. It is intended that this become a standard method for the determination of these characteristics in experimental and service type airplanes.

Float for B-12A Airplane

A representative of the Engineering Section is now at the plant of the Edo Aircraft Corporation, College Point, Long Island, New York, to supervise the installation of floats containing gasoline tanks of 600 gallons capacity on a B-12A airplane. Part of the landing gear mechanism will be reworked to make it suitable for operating the retractable float water rudders, and the fuel system will be tested for its ability to supply the main

tanks with gasoline from the float tanks. When the installation is completed, Materiel Division officers will flight test the airplane at North Beach. If these tests are successful, the airplane will be assigned to Langley Field for service test of the equipment.

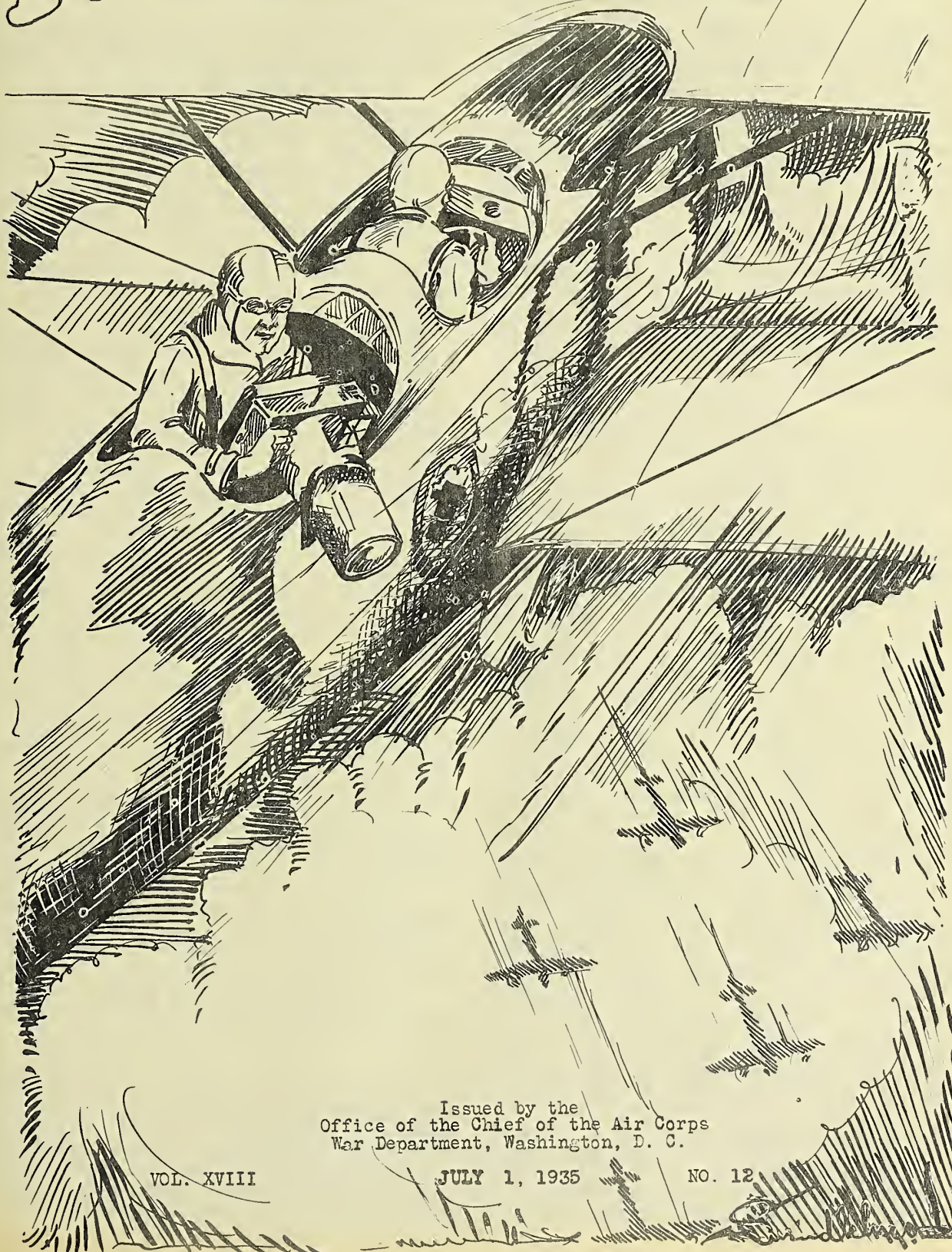
Synchronized Gun Installation Difficulties

In an effort to overcome difficulties previously experienced with synchronized gun installations in P-26 series airplanes, the Materiel Division representative now at Barksdale Field in connection with A-11 airplanes, will revise the synchronized gun installation in P-26's and conduct sufficient firing operations under service conditions to determine corrections necessary.

Engine Gauge Unit

An engine gauge unit, incorporating an electrical resistance type thermometer, has been submitted for test by the Weston Electrical Instrument Company, Newark, New Jersey. If this type of instrument proves satisfactory, it will eliminate the unsatisfactory conditions which have arisen due to breakage of thermometer capillaries.

NEWS LETTER



Issued by the
Office of the Chief of the Air Corps
War Department, Washington, D. C.

VOL. XVIII

JULY 1, 1935

NO. 12

Information Division
Air Corps


July 1, 1935

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

NEW CLASS GRADUATES FROM ADVANCED FLYING SCHOOL



BRIGADIER General Oscar Westover, Assistant Chief of the Air Corps, was the principal speaker at the commencement exercises of the Class of 68 students graduating from the Advanced Flying School, Kelly Field, Texas, on Saturday morning, June 22nd. General Westover's presence at Kelly Field was literally a flying visit.

The student class comprised two Air Corps officers, three officers from other branches of the Regular Army, and 63 civilians and enlisted men who pursued the intensive one-year flying course at the Air Corps Training Center under the status of Flying Cadets. Among other officers attending the exercises were Brigadier-General James E. Chaney, Assistant Chief of the Air Corps and Commandant of the Air Corps Training Center; Brigadier-General Robert C. Foy, commander of the Second Field Artillery Brigade, Fort Sam Houston, Texas; Colonel Jacob E. Fickel, Commandant of the Advanced Flying School, and Lieut.-Colonel H.H.C. Richards, Assistant Commandant.

The exercises were held in the post theater, following the aerial review in which all of the graduates participated. After the introductory remarks by Col. Fickel, General Westover addressed the assemblage, as follows:

"General Chaney, Colonel Fickel, Colonel Harms, members of the graduating class, ladies and gentlemen:

I come before you today as the representative of the Chief of the Air Corps, who sincerely regrets his own inability to be present on this occasion and who wishes me to convey to the Commanding General of the Air Corps Training Center, to the Commandants, staffs and faculties of the Primary and the Advanced Flying Schools, and to the members of this graduating class particularly his hearty congratulations upon the completion of the training of this class. He wishes me also to convey his greetings to the officers on duty with the School of Medicine, and to all the officers on duty at the Training Center and to their families.

I, personally, regret that the Chief of the Air Corps cannot be present on this occasion. It would be particularly appropriate, and for each of you a memorable circumstance, to receive your certificate from the hands of one who is not alone the Chief but who also holds the distinction of being our first mili-

tary aviator. Then, too, I regret that the Chief of the Air Corps cannot be present on this occasion, since it means that I must come to you on such short notice that I have no specially prepared address to give you. I must confess, however, that I am happy to be here and I cherish the opportunity of making some remarks, which I hope may be of interest and value to you.

Whenever I return to Texas, and especially the Training Center, I am forcibly reminded of our pioneer period of development in aviation, because Texas is inseparably connected with those early days of flying. It is a long flight from the 'stick and wire' Jennies to our present ships of steel. In those days flying was starting; today you are starting flying.

My contact with the Air Corps Training Center has been sufficient to acquaint me with the high standards and efficiency of administration and training which mark it today as the best training establishment of its kind in the world. Therefore, it is appropriate that my first remarks and expression of official appreciation should be addressed to the commissioned, enlisted and civilian personnel who have contributed their wholehearted efforts to achieve this result. The Air Corps is, indeed, very proud of the results continually being accomplished at the Training Center, and as Assistant Chief of the Air Corps I desire to praise highly and sincerely those whose leadership and initiative, regardless of official capacity, have made this possible. To the Directors of Training and their stage, section and flight commanders and instructors I especially extend official appreciation of the Chief of the Air Corps of their consistently good, though hard, work in carrying on the training with that marked thoroughness and efficiency which has characterized the high standard set for qualification in flying at these schools. On the manifest results of their endeavors, I also congratulate the Commandants of the Flying Cadets, to whose leadership we entrust the responsibility of inculcating in students those essential traits of military character and discipline from which we build the future adaptability and usefulness of graduate flying cadets and reserve officers.

A successful completion of a year's

training at this school is indicative of that teamwork which is so essential to successful academic and practical training. Particularly is this teamwork necessary among the instructor personnel, without whose thorough coordination and wholehearted effort there could be no high standard, and it is only high standards that we try to achieve. I am aware, too, of the many handicaps with which the Training Center and School authorities are faced throughout each year of these times of aviation depression. Shortage of personnel, shortage of equipment impose additional problems of administration and additional hours of work in order to insure that degree of safety in flying training which is correlated with efficiency of training. So it is with full appreciation of the efforts of all personnel connected with the Training Center that I express congratulations of the Chief of the Air Corps and his commendations for work well done.

I congratulate particularly the members of the Graduating Class who, by completion of this course, have demonstrated not alone their ability as pilots, but the possession by them also of those essential qualities which make a good officer. You have acquired a knowledge and appreciation of the fundamental traits of military character - loyalty, obedience to orders, respect for superiors of the military service, promptness, frankness, attention to duty, maintenance of good physical condition, etc., and the training and technique of flying is without parallel, as evidenced by the perfection of your review this morning.

Reviewing the kind of training which you have undergone here, it is evident that each of you have been under the closest supervision both personal and professional. Every fault has been pointed out and corrected. Yours has been a life of orderly regulation, both in your work, your play and your flying, and whether in barracks, mess halls, drill periods or other formations.

When you join your organizations, mostly with the General Headquarters Air Force, you will still be supervised but permitted greater freedom. Remember then what you have been taught here both in the air and on the ground. As expressed by an old instructor after giving his students the final check, 'when you start to do something and your feet start "patting on the rudder bar," don't do it.' This quotation applies both to your professional and personal conduct.

It is always sad to refer to those who commenced the course with you but were unable to complete same. It is particularly unfortunate that Major Zablan of the Philippine Constabulary should have suffered such an untimely death in an airplane accident just about the time he was due to receive his coveted wings and

certificate of graduation from this School. So, too, is it sad to refer to others who have failed to complete the course, some through faults of their own, and others through no fault of their own. Yours has been a hard course, a long course, a course which has tested your determination and your morale, undoubtedly, on many occasions. I have no doubt that many of you, upon receiving your appointment as flying cadets, felt that you had overcome the greatest obstacle, namely, your appointment, and that your progress thereafter would be a matter of course. Undoubtedly after a month you found that to be an elusion and that you were up against a tough proposition, and I imagine each month since then has confirmed that fact. You are, so to speak, the survival of the fittest, and the test which you have survived was made both thorough and difficult for your protection in the future. The fact that you have overcome doubt and tendencies to quit, all evidence your determination to succeed in the flying game and, as a result, you have survived the test with flying colors. You have won your flying insignia, and looking ahead to a real flying future. Bear in mind, however, that the flying man's test is a continuing one, and every flight and every new plane presents some test of ability and technique.

From now on, judgment becomes of particular importance, and that can be acquired only through experience. The fact that you have been well trained in the art of flying, including instrument- and blind flying, may give you a false sense of security, and particularly confidence in the performance of flying missions. School yourself in proper judgment. It will take years of practical experience to round out your judgment. For instance, take the question of flying in bad weather. No one can withstand the fury of the elements. Recent tornadoes, floods, dust storms, and other destructive meteorological disturbances are clear evidence of this. Therefore, it is always the better part of wisdom for you to seek a safety haven under such conditions, thus insuring the safety, not only of your own life, but also the lives of others.

Curb absolutely any tendency to free flying or grandstand flying. Make it a fixed rule to stick with the plane to the efficient accomplishment of any assigned mission; to do otherwise varies from the intent of the order and may jeopardize your career and the rights and benefits of your dependents. Develop forethought and plan carefully all your flying. You will have plenty of opportunity for initiative and development. Your careers will be watched both during your years of service as a flying cadet of the tactical unit and during such subsequent active duty which you may perform as Reserve officers. There is legisla-

tion in prospect which may make it possible for you finally to enter the Regular Army Air Corps, and I hope that you may be successful in doing so.

I envy the opportunity of embarking on a flying career at a time when aviation developments are as rapid and as broad as they are today. When I recall the development of heavier-than-air aviation, which all occurred in my life time, I can appreciate the tremendous advances already made and predict even more marked advance for the future.

Again I congratulate you gentlemen, and before I close I wish to especially congratulate the officers who have just completed the course. To those who have come from other branches of the service, I wish to assure a hearty welcome in the Air Corps, for you have met the initial requirement for a successful career therein.

To Major Sorenson and Captain Hill, with whom I have served in the lighter-than-air branch of aviation, I wish to express my personal congratulations - to them and to the service - the former upon his possession of so many of the coveted ratings of the Air Corps, and the latter upon just having completed the primary flying course at Randolph Field.

My best personal wishes and official felicitations accompany each of you upon your graduation from this School. We will watch your progress and trust each may be fully successful in this future service."

The list of graduates and their station assignments appear elsewhere in this issue of the News Letter.

---oOo---

SIXTH PURSUIT SQUADRON IN TRAINING CAMP

The 6th Pursuit Squadron, stationed at Wheeler Field, T.H., conducted its annual training in Field Exercises, Ground Gunnery, Aerial Targets and Bombing at Bellows Field, Waimanalo, T.H., during the period from May 2nd to May 25th, inclusive. During this period, except for a week's intermission when the squadron participated with the various units of the 18th Composite Wing in the Joint Army-Navy-U.S. Fleet Exercises, each pilot completed the War Department Training Directive requirement in Field Exercises, Gunnery and Bombing, and averaged approximately 40 flying hours.

Results obtained were most gratifying, every pilot firing for record attaining "Expert," and in most cases making sufficient scores in one event to qualify them for all three events. All pilots were not required to fire for record this year, having qualified during the past three years.

First Lieut. Curtis E. LeMay, Group Communications Officer (attached to the

6th Squadron for flying), fired all events and recorded the fine score of 1304 out of a maximum 1500. First Lieut. Mark E. Bradley, Jr., Squadron Engineering Officer, made the highest score in the record events with the splendid mark of 1033.5.

The enlisted personnel fired ground machine guns at a towed sleeve target and at ground targets, and were afforded excellent experience in the utilization of these arms. The noncommissioned officers of the first four grades fired the 45 cal. automatic for record.

Commissioned personnel who attended the Field Exercises, in addition to Major Early E.W. Duncan, Commanding Officer, were: Captains Ray H. Clark, Flight Commander and Squadron Adjutant; Morris R. Nelson, Operations and Intelligence Officer; B.L. Boatner, Flight Commander; 1st Lieuts. L.O. Ryan, Armament Officer; M.E. Bradley, Jr., Squadron Engineering Officer; C.E. LeMay, Group Communications Officer; R.H. Griffith, Communications Officer; 2nd Lieuts. J.B. Shields; B.J. Webster, Assistant Adjutant, and S.J. Grubbs, Jr., Assistant Engineering Officer.

Recreational activities, comprising such popular sports as baseball, playground ball, volley ball, horse-shoe pitching and swimming, occupied the leisure hours of the organization and, as a result, the 6th Pursuit Squadron's encampment for the Fiscal Year 1935 was most enjoyable in every department.

---oOo---

SUBMERGED SUBMARINES SEEN FROM ALOFT

The 19th Pursuit Squadron, stationed at Wheeler Field, T.H., participated with the other Squadrons of the 18th Pursuit Group in the Joint Army-Navy-U.S. Fleet Exercises in connection with the recent fleet operations. The mission was to locate submarines that might attack the fleet being supported. It was found that, except when the sun was very low and light values were much reduced, it was possible to locate submerged submarines from an altitude of between 750 to 1,000 feet. Many submarines were located and reported by radio and visual signals. Missions of about three hours' duration were flown. These operations presented an opportunity for many Air Corps officers to make their first official contact with the Navy in joint operations, and the experience was very valuable professionally.

---oOo---

The Second Bombardment Group in 26 B-6A's, 2 BT-2's and 2 PT-3's, and led by Colonel Oldfield, departed from Langley Field, Va., on the morning of June 11th for Mitchel Field, L.I., New York, for one month's tour of duty in connection with training of West Point Cadets. Practically every officer and enlisted man of the Group made the trip.

V-6817, A.C.

ATTACK AVIATION TACTICS IN THE HAWAIIAN DEPARTMENT

BECAUSE of it being stationed at Wheeler Field, adjacent to the Hawaiian Division at Schofield Barracks, the 26th Attack Squadron has been afforded, in cooperative missions, opportunities to gain a great amount of valuable information and experience in the performance of tactical problems that must necessarily fall to the lot of Attack Aviation in its mission of offense and defense.

A cooperative problem of beach defense was recently worked out with the aid of the 13th Field Artillery and a searchlight section of the 64th Coast Artillery. This problem was to determine the effect of machine gun fire against small water borne craft, attempting to make a landing, illuminated from defensive positions ashore.

The target was a 6' x 10' x 4' structure covered with target cloth, mounted upon floats and drawn shoreward from 3,000 yards by means of cable and winch at approximately five miles per hour.

The illumination in the first phase was by two standard Coast Artillery Corps 64" searchlights, 1,000 yards apart, laid on the target. The range in this phase was from 2,000 to 3,000 yds., and the attack was made by 6 A-3B airplanes in column. No tracer ammunition was used. The results were extremely satisfactory. The greatest deflection noted was approximately 10 yards, and the overage and shortage were extremely small. Difficulty in aligning sights, due to darkness, was reported by some pilots, but it is thought that further practice along this line of firing will solve that problem. The firing will also be aided by the use of tracer ammunition.

In the second phase, the same target and range was used, but the illumination was furnished by the airplane dropping M III flares over the target. The attack was made in the same manner as in the first phase. Difficulty was experienced by the flare ship in locating the target, and the illumination was poor, with consequently poor results in firing. A study of the question of illumination leads to the following conclusions which, however, must be tested and proved: Flares must be dropped close to the surface of water and to the rear of target, altitude of dropping about 200 to 300 feet. The present type of flare is not suited for this work. A flare which would ignite upon contact with water and float upon the surface while burning would seem to be ideal.

In this problem the communication was found to be very poor, both panels and Very Pistol lights proving unsatisfactory. "It would seem," says the News Letter Correspondent, "that we must come

to the use of voice radio between ground and air for such work. The above statement may seem vague, unless it is understood that such communication is very necessary due to surface craft straying past the boundary lights and causing many interruptions."

The News Letter Correspondent goes on to say that it is interesting to note that, with the loading equipment available at the station, it required 75 man hours to load the ammunition for this flight and, had bombs been used, an additional 40 man hours would have been required.

Due to the small size of the auxiliary fields in the area and the absolute necessity of dispersion of aircraft for defensive purposes, the problem, especially at night, of take-off and landing control has caused a good deal of discussion among the personnel of the 26th Attack Squadron. Various methods have been tried, the most satisfactory of which has been the Air Traffic Control Lamp, Type B-1-A. This lamp was used to signal ships when to take off, direction, and when to land. It is extremely simple to operate, and the results obtained were all that could be desired. In a recent night test it was found that from dispersed defensive positions the airplanes could be dispatched at 30 second intervals. Landing of airplanes was accomplished at 45-second intervals by the same method. Further tests are under way to determine the value of this device for daylight dispatching from dispersed positions.

The 26th Attack Squadron is organized under Table of Organization 279-P, War Department, 1925, and consists of 90 men, 12 officers assigned and 6 attached, and 15 A-3B airplanes. Forty percent of the aircraft are normally at the Hawaiian Air Depot undergoing overhaul. The Squadron is organized into: Flight "N," with Captain Harvey F. Dyer as commander, and Flight "R," with Captain Homer L. Sanders as commander.

---oOo---

50TH OBSERVATION SQUADRON WINS TROPHY

Members of the 50th Observation Squadron, Luke Field, T.H., were pleased to learn recently that they had been awarded the Annual Aircraft Efficiency Trophy for the Training Year ending June 30, 1934.

This Trophy is awarded annually by the H.F. Wickman Company, Ltd., of Honolulu, to the squadron demonstrating the highest efficiency in the operation and maintenance of aircraft.

In commenting upon this award, the News Letter Correspondent of the 50th, says: "We feel pretty good - thanks - and we are out to win it for the second consecutive year."

V-6817, A.C.

NEW PHYSIOLOGICAL RESEARCH UNIT AT WRIGHT FIELD

By Marguerite Jacobs Heron



URING the War and until 1920 there existed at Mineola, Long Island, under the direction of E.C. Schneider, Ph.D., well-known in Army circles as author of the "Schneider Test," an "Air Service Medical Research Laboratory," established for the purpose of ascertaining the various effects of flight upon personnel and of devising equipment to obviate those effects which proved adverse to health and comfort. In the World War, the American pilot had, except in isolated instances, been subjected for the first time to flight at high altitudes. The whole problem of oxygen, the amount needed and equipment for supplying it, was so new that it engrossed the concentration of the research group virtually to the exclusion of all other considerations. By 1920, however, the development of aircraft itself was moving forward at such a rapid pace that it demanded the full attention of the Air Corps, and the Medical Research Laboratory, studying pilots' equipment was permitted to pass quietly out of the picture.

For fifteen years this aircraft development has held the center of the stage. Speed of normal flying has been greatly stepped up. Flight at altitudes demanding additional oxygen has increased, and higher altitudes for normal cross-country work promise to become more or less common in usual practice. This progress has been so heartily accepted by the air personnel that, although now and then some pilot has complained of his teeth breaking off or loss of fillings after altitude work with oxygen, or mentioned a "blacking out" experience in high speed turns, it has scarcely been realized that for fifteen years no work has been done toward studying the changed effects of modern flying upon pilots with a view to supplying equipment that would normalize those effects for his physical comfort and well being.

The School of Aviation Medicine, while active in its research along the lines of "occupational" influences and illnesses and their cures, except in the instance of goggles, has had no tie-in with the equipment angle of the problem.

With these considerations in mind, the need of some such research laboratory as was operated during the War and until 1920 became increasingly clear to Major Malcolm Grow, Chief Flight Surgeon of the Air Corps, who placed the matter before the proper authorities. At a conference between the Chief of the Air Corps and the Surgeon General of the Army, in April, it was decided to establish at Wright Field as part of the Engineering Section, a Physiological Research Unit "to conduct

research in connection with the development of flying equipment and accessories to the end that the efficiency, health, and lives of personnel be protected." The Materiel Division with its engineering facilities and personnel was considered the logical locale for the new laboratory, and a medical officer, Captain Harry G. Armstrong, was ordered to Wright Field to make a thorough study of needs and possibilities and to line up the organization and work.

In attacking the problem, it was surprising to find how little data on the subject were in existence. Concerning oxygen, for instance, knowledge of which is of immediate importance, a survey of all the relevant literature available, including abstracts from 92 periodicals and 22 books, failed to cover conclusively such points as the most favorable amount to be inhaled by the individual, the effect of its frequent use, its effect if used for long periods at a time, the cause of its apparently destructive influence upon the teeth, the matter as to whether the gaseous or liquid form is preferable for human consumption, the degree of concentration at which it becomes poisonous to the system, the oxygen requirements of a sealed cabin and a supercharged pressure cabin, the effect of oxygen and carbon dioxide mixtures at high altitudes.

Research in this field will have to start with the fundamentals. A skull is being fitted with human teeth, some with gold and amalgam fillings, and this will be subjected to oxygen in both forms and under all varying temperatures and amounts. Results of the use of oxygen upon the systems of animals are being studied. With various other methods of attack, it is expected that information will be gained which will make equipment possible to meet all requirements, from the flying as well as the comfort and health standpoints of the individual.

In starting research on the physical reaction called "blacking out," a centrifuge is being constructed. By means of this equipment it is hoped to discover the amount of centrifugal force required to bring about the "blacking out" sensation. A German scientist in experimenting with dogs finds that upon being subjected to these high forces, small hemorrhages of the brain result, and it is possible that definite physical damage may be the penalty for the human being also. The new laboratory will endeavor to determine these things definitely.

The question of the endurance of cold in open cockpits will also be gone into thoroughly. Without doubt an uncomfortable-

able pilot is operating at a tremendous disadvantage and nothing has a more disintegrating effect upon his morale or efficiency than the cold that heavy, bulky clothing cannot keep out. For years it has been known that heavy clothing cannot keep a flyer warm in open cockpits which are full of drafts. Open cockpits must be designed so that drafts through the floor and sides are shut out, and they must be heated. It is only through this method that an approximation of normal body heat can be maintained. The frosting of goggles and moisture under face masks have always been causes of complaint. Heating of cockpits would eliminate these difficulties as well as the wearing of electrically heated or too bulky gloves, which pilots find extremely awkward and bothersome in operating an airplane.

A pilot suffering from cold has but one idea - to land as quickly as possible and regain comfort. He will not make his usual leisurely circle of the landing field to look things over before coming in, and so may experience a crack-up as a result of his haste and dulled perceptions. From studies recently completed, it has been shown that the efficiency of the average pilot at the temperatures prevalent at 10,000 feet in continental United States is reduced 23 per cent.

A study of the escape of carbon monoxide gas into cockpits will also be undertaken, to determine the increased amount of absorption into the blood at low temperatures and high altitudes with the development of protective equipment in view.

These are but a few of the problems set forth for immediate research. By July first, it is anticipated that the laboratory will be fully established.

If the flight surgeon's feeling is justified, that in considering the aerodynamic and construction characteristics of an airplane the designer has been apt to forget that a man has to fly it, then the new laboratory group is there in the interest of the "forgotten man." Nor is it desired to have the laboratory in any sense a closed corporation. It is above all things for the use of the service. Those interested in its development hope to make it first and foremost a clearing house of ideas, and flight surgeons and Air Corps officers and personnel are invited to cooperate. Suggestions are wanted, and any solutions that are submitted will be given respectful consideration.

---oOo---

Among prominent visitors to the flying field utilized by the 119th Observation Squadron, New Jersey National Guard (Newark Airport), were President Roosevelt, Secretary of War George H. Dern, and Secretary of the Treasury Henry Morgenthau, Jr.

RESCUE METHODS PRACTICED IN HAWAII

An interesting test and demonstration of the use of the Douglas Amphibian for rescue purposes was recently carried out at Pearl Harbor by personnel of the 75th Service Squadron stationed at Wheeler Field, Schofield Barracks, T.H.

Practice in the rescue of personnel from water-wrecked aircraft is highly desirable in Hawaii. Major R.C. Wriston, Air Corps, as pilot, with Staff Sergeant Jerome B. McCauley as co-pilot, and with the entire crew of the Amphibian as passengers, made several landings and approaches to "three men in a boat" which simulated a wrecked airplane. By the method of trial and error, a good deal of valuable information was obtained as to the best method of approach and rescue of personnel. This information is being prepared for the instruction of pilots and crews assigned to alert duty with the amphibian.

---oOo---

SAN ANTONIO DEPOT AIDS FLOOD SUFFERERS

As an incident in connection with the recent heavy and unprecedented deluge of rains in this part of Texas, causing disastrous floods in an extensive area surrounding San Antonio, food supplies were ferried on June 15th to sixty youths of the Citizens' Military Training Camp at Medina City, marooned by high water, in a Bombardment plane piloted by Master Sergeant C.P. Smith, on duty with the air transport service at the San Antonio Air Depot. Lieut.-Colonel C.P. George, of the Eighth Corps Area Inspector's Office, accompanied this flight in another plane, piloted by Captain E.D. Perrin, of this Depot.

It was necessary to drop the supplies from the ship while in flight, as a landing was impossible.

On the morning of June 18th, Mr. Wm. M. Cason, Civil Service employee of the Engineering Department of the Depot, who is a well known pilot in San Antonio (as a private avocation), and who was then on leave of absence, flew a commercial plane, chartered by the Pioneer Flour Mills of San Antonio, and loaded with flour and cereals furnished by that company, on an emergency relief mission to families isolated by floods near the towns of Camp Wood and Barksdale, west of San Antonio. He also carried newspapers to them and brought back mail which it had been impossible to dispatch previously. Mr. Cason also made other private emergency flights in the flooded areas, ferrying an electric repair man to restore light service and other men to make a survey of the property damage, etc.

---oOo---

During May, the Engineering Department of the San Antonio Air Depot overhauled a total of 33 airplanes, 48 engines, and repaired 38 planes and 47 engines.

SIXTH COMPOSITE GROUP RETURNS FROM CENTRAL AMERICA

The 6th Composite Group, Air Corps, returned to France Field, Panama Canal Zone, from an extended navigation flight through Central America, on May 19th. The flight equipment consisted of 7 O-19C Observation planes and 2 B-2A Bombardment planes. The personnel participating in the flight were: Lieut.-Col. L.H. Brereton, Majors W.R. Taylor, W.B. Mayer, R.H. Ballard, J.P. Sullivan (QMC), Captains C.W. Cousland, W.M. Scott (M.C.), H.R. Baxter, J.F. Guillet, F.H. Robinson, 1st Lieuts. J.W. McCauley, E.P. Rose, G.C. Northrup, P.E. Gabel, W.H. Tunner, C.T. Mower, W.S. Graham, D.F. Callahan, Jr., Master Sgt. C. Haymes, Sergeant J.S. Welch, Corporal H.T. Swanson, Privates J.F. Curry and J.M. Bourke.

The itinerary of the flight was as follows:

France Field, Canal Zone, to David, Republic of Panama, where a servicing stop was made; thence to San Jose, Costa Rica, where an overnight stop was made. San Jose, the capital of Costa Rica, with a population of 150,000, is at an elevation of 4,000 feet. Mr. Gerald Drew, Charge d'Affairs of the American Legation, entertained the members of the flight.

On the following day the flight proceeded to Managua, Nicaragua, where a servicing stop was made. The American Minister, Mr. Lane, gave a luncheon for the personnel of the flight. The flight then proceeded to San Salvador, El Salvador, and en route passed over the active volcanoes of Momotombo and San Miguel. A 3-day stop was made at San Salvador, and during the stay of the Army airmen, the American Minister, Dr. Frank P. Corrigan, gave a luncheon for the members of the Salvadoran cabinet and the Commanding Officer and field officers of the flight.

The President of El Salvador, Senor General don Andres de Menendez, gave a reception for all the members of the flight. The American colony in San Salvador also gave a large dinner and dance for the visitors. At the San Salvador Country Club, the President and his Cabinet gave a dance in honor of the visiting aviators. During the stay in San Salvador, several members of the President's Cabinet were taken for flights.

After leaving San Salvador, the flight returned to Managua, Nicaragua, where an overnight stay was made. A luncheon was given at Casa Colorado, a beautiful place in the mountains some 17 miles out of Managua. This luncheon was given by the staff of the Nicaraguan Army. On the way out, a very unusual sight greeted the visitors - numerous coffee plantations or "fincas" in bloom. The coffee plants bloom only once a

year, and only for about three days. That afternoon the Commanding Officer of the flight, Lieut.-Col. Brereton, and his field officers, were given a reception by President Sacasa at his palace. In the evening, the American Minister, Mr. Lane, gave a buffet dinner.

The flight left Managua early the next day and proceeded to San Jose, Costa Rica, where an overnight stay was made. The personnel were entertained by Mr. Drew, the American Charge d'Affairs, and in the evening attended a dance at the Grand Hotel, Costa Rica. The flight returned to France Field, via David, R.P., the next day on schedule.

From a training viewpoint the trip was a great success. From a social viewpoint it was even more of a success. Many friends were made, and it is believed that from an official viewpoint friendly and cordial relations between the United States and various Central American countries were more firmly cemented.

---oOo---

WING MANEUVERS NEAR LOS ANGELES

Lieut.-Colonel Clarence L. Tinker, Commanding Officer of the 7th Bombardment Group, Hamilton Field, Calif., led a flight of 16 Martin Bombers to the maneuvers of the 1st Wing, near Los Angeles, Calif., on June 18th. This contingent represented the 7th Bombardment Group, less the 9th Bombardment Squadron, whose planes had been divided between the 11th and the 31st Bombardment Squadrons. The 11th flew to an encampment at Mines Field, Los Angeles, while the 31st flew to Long Beach.

In conjunction with the 17th Attack Group; the 88th Observation Squadron from Brooks Field, attached to the 7th Bombardment Group, and the 19th Bombardment Group from Rockwell Field, the program before the 11th and 31st Bombardment Squadrons was to work out war problems in the vicinity of Los Angeles at a radius of 500 miles. These war problems were to cover the period from Tuesday, June 18th, to Thursday, June 20th, inclusive. Tuesday, Wednesday, Wednesday night, and Thursday morning were to be consumed in the solution of these problems, with the wing concentration taking place on Thursday night at Rockwell Field. The 11th and 31st Bombardment squadrons were scheduled to leave San Diego at noon on Friday for their home station, Hamilton Field.

---oOo---

A new \$5,000 X-Ray machine was installed in the Station Hospital at Hamilton Field as a diagnostic aid. Lieut.-Col. Glenn I. Jones, Post Surgeon, has appointed Captain Junius P. Smith, Medical Corps, as the X-Ray Officer.

MARSHALL FIELD INUNDATED BY FLOOD

Flight D, 16th Observation Squadron, stationed at Marshall Field, Fort Riley, Kansas, is working every day, including Sundays and holidays, removing mud from the buildings and cleaning equipment, caused by the recent flood which inundated the entire airdrome, writes the News Letter Correspondent as of June 15th. He goes on to say that all activities have been suspended at Marshall Field since the third of this month. A temporary air base has been established, however, about 5 miles northwest of Fort Riley proper. The planes were ferried to this field and are located and operated there. The servicing facilities are somewhat limited and our gasoline supply is practically exhausted. We have partly solved the problem of maintaining a limited amount of fuel on hand by servicing the gas tanks to capacity whenever our planes stop, enroute here, at Fort Leavenworth. In this manner we have been able to have sufficient fuel for local flights.

Flights were made over the flooded areas all along the rivers emptying into the Kaw, the latter being adjacent to the flying field and the one that caused all the damage, to determine the extent of overflow and damage done wherever they went over their banks.

The commissioned and enlisted personnel are temporarily quartered on the main post at Fort Riley. We hope to move back to the field in the near future, possibly one week.

The flood arrived much sooner than was anticipated, and came in a torrent. There was hardly sufficient time to move the immediate personal effects and complete evacuation of the equipment was utterly impossible. All major items, however, were elevated to places where the water did not reach, and were not seriously injured. We have, with but a few exceptions, restored most of the equipment to a serviceable condition, and this work is still in process.

Marshall Field is, unfortunately, located on the bend of the Kaw River, and some of the old inhabitants in this vicinity state that this place was entirely inundated in the year 1903 and again in 1915. It appeared as though the river tried to change its channel and follow a straight course through the center of the field. This it virtually succeeded in doing, at the same time flooding the entire surrounding area.

The depth of the water on the field varied from three to six feet. The hangar, having the lowest floor on the field, had the maximum. The damage to the quarters was the heaviest. Basements of officers' quarters were filled with mud and water, and in one of the quarters the water reached and covered the first floor. There are cave-ins around

the quarters with depths of from 3 to 10 feet. In all probability this will cause the quarters to settle to a considerable extent.

In the noncommissioned officers' quarters the water reached a level of from 9 to 12 inches above the first floor and, of course, filled all basements. The floors were warped and bulged in all quarters that were covered with water.

All wooden structures were moved to some degree. The paint house, with all the paints and allied material, was moved approximately one-half mile from its original location, and is now standing on the flying area near the north floodlights.

To illustrate the high velocity of the current, a container full of .30 caliber cartridges was carried about four or five blocks from the place where it was stored. Some of the National Guard buildings were rammed into our Transportation hangar. Old dilapidated shacks, not belonging to the field, are strewn all over the airdrome. The transportation hangar is stripped of part of its wall and roof, and its interior is in a ravaged condition.

The Aqua gasoline system and the field lighting equipment are out of commission. The extent of the damage to this equipment has not yet been determined. In the case of the gasoline storage tank, the river has moved within approximately 10 yards from it, where previously the bank was about 70 yards distant. If we should experience another flood, even though not as severe as this one, the gasoline storage system will be completely wiped out. Further, if there should be a repetition of the river going on a rampage, the barracks and officers' quarters will be completely carried or washed away. We are hoping that the elements of the weather will stay kind to us, as another flood would prove exceedingly disastrous. The main channel of the river has moved to within about 35 yards of the officers' quarters, whereas prior to the flood the bank was between 150 to 200 yards away.

During the past week the river receded to some extent, but at this writing is fluctuating, due to heavy rains west of here and swollen small tributaries still emptying large bodies of water into the Smoky Hill and Republican rivers. These two rivers join the Kaw a short distance from the field, and it was somewhat difficult to determine the exact location of the junction of these rivers by aerial observation.

It is almost unbelievable how such small rivers, creeks and even tiny brooks, that barely had enough water to flow, could ever become so swollen with water and go on a rampage as they did in this locality. The flow of most of the small streams was reversed. Towns all along the main rivers were inundated, and several casualties and considerable damage to pro-

erty were reported by the rescue parties. All troops were held in readiness for rescue work.

Whatever fell in the path of this furious torrent was practically doomed, and a scene of devastation marked its wake. A hint of comedy, mingled with slight sentimentality, emanated from some outside parties, who asserted that "perhaps we should have been equipped with seaplanes, or at least amphibians." The writer believes the suggestion somewhat unwarranted, especially in the face of our present sad plight.

---oOo---

THE COUPE DEUTSCHE DE LA MEURTHE

The contest for the Coupe de la Meurthe, which has become more or less an Inter-Caudron Trophy, was won at Etampes, France, on May 19th, by Mr. Raymond Delmotte, piloting a Caudron C.460-Renault-456, who covered the 2,000 kilometers (1,242 miles) in 4 hours, 30 minutes, 17 seconds, and averaged 276 m.p.h. France has now won the Trophy three times and holds it for good.

All five entrants who qualified this year were French and flew Caudron machines. M. Arnoux (Caudron 460-Renault-456) broke the world's record over 100 kilometers (62.14 miles) with a speed of 291.5 m.p.h., when he flew it in 12 min. 17 seconds, during the contest.

The winning machine was fitted with a 330 h.p. 6-cylinder Renault motor and a retractable undercarriage.

It is interesting to note the considerable advance in average speed attained in this year's race over that recorded in the two previous contests. In the first race in 1933, the winning airplane, a Potez, was flown at an average speed of 200.57 m.p.h. In 1934, a Caudron plane averaged 217.2 m.p.h.

---oOo---

NEW DESIGN OF LIGHT AIRPLANE

A Frenchman, M. Henri Mignet, has recently designed an entirely new type of plane which he has termed the "Sky Louse" or "Pou-du-Giel." The plane is so simple in design that the inventor claims to have solved the problem of supplying to the general public a plane which is non-spinning and non-stalling; which flies itself with the absolute maximum of safety and renders flying training unnecessary. Mr. Mignet has published a hand-book wherein he has laid down the fundamentals of his plane as well as his aims for the future. The book gives a full and complete description of the apparatus and the method whereby any person may build the plane within his own backyard. The specifications of this plane are as follows:

Span, front wing, 19½ ft.; rear wing, 13 ft. 1 in.; chord of both wings, 4 ft.

7 in.; length, 11½ ft.; weight, empty, 220 lbs.; take-off run, 328 ft.; clears 40 ft. obstruction after an 800 ft. run; climbs to 3,280 ft. in 19 minutes.

---oOo---

PARACHUTE FOR LOWERING AMBULANCE LITTER

A model of an ambulance litter with parachute attached, for the purpose of lowering a patient from an airplane to the ground in case of emergency, is on display in the Army Aeronautical Museum at Wright Field, Dayton, Ohio. This equipment, developed by Air Corps engineers, shows a means of holding a patient in a litter in the event necessity demands a descent by parachute.

Knowing the patient would be helpless, the position of landing had to be considered so that patient would not land on his head and sustain further injury.

The idea of a parachute with a litter is not entirely new, as it has been used as a "stunt" novelty. For actual use, the shock of landing would have to be reduced as much as possible. The proposed scheme on the model was to have the feet of litter protector stick into the ground, which would prevent dragging, also to have a pneumatic shock absorber in the litter protector.

A series of spring rods around the protector would prevent the litter from striking the ground in flat position and further injuring the patient.

The parachute canopy is contained in the upper end of litter protector, the top being attached with a breakable static line to some part of the aircraft, thus assuring proper deploying of canopy after launching of the patient, since, presumably, no aid could be furnished by the patient himself.

The usual Air Corps parachute measures 24 ft. A 28 to 30-ft. canopy was proposed for this model.

Several tests were made, attaching a litter to a 30-ft. canopy to determine the proper size. This development never progressed beyond the small model, as it belongs distinctly to war times, and the priority of other more immediate engineering developments has caused a postponement of further experiments for the present.

---oOo---

A CORRECTION

In publishing in the April 15th issue of the News Letter the report of the Engineering-Supply Conference, held at the Materiel Division last November, an error was made on page 182, under the heading "4. IGNITION," paragraph "e. Ignition Cable." This paragraph should read:

"Experience has shown that the standard ignition cable is definitely unsuitable for pressure baffled air-cooled engines. The new high temperature cable appears to be satisfactory for all installations."

NEW CLASS TO BEGIN TRAINING AT RANDOLPH FIELD, TEXAS

A total of 159 students, comprising 8 Air Corps officers, holding lighter-than-air flying ratings; 6 officers from other branches of the Army, 11 enlisted men from the Army Air Corps, one from the Infantry, one from the Signal Corps, and 132 candidates from civil life, will report to the Commandant of the Air Corps Primary Flying School, Randolph Field, Texas, during the latter part of June, and will constitute the July class to begin the year's course of flying instruction at the Air Corps Training Center.

The eight months' course at Randolph Field is divided into the Primary and Basic stages, each of four months' duration. During the Primary Stage, students fly the primary training airplane, and the probability of their successfully completing the entire flying course generally hinges upon the progress they make during these first four months. Upon being transferred to the Basic Stage, students fly the Basic Training plane, the controls of which are more delicate. This airplane serves as the medium of transition to the regular service types of airplanes which are used when graduates of the Primary Flying School are transferred to the Advanced Flying School at Kelly Field, Texas, for their final four months of the flying course.

Those Air Corps officers graduating from the Advanced Flying School will go through the formality of annexing two additional flying ratings, those of "Airplane Pilot" and "Airplane Observer" to the two they already hold, namely, "Airship Pilot" and "Balloon Observer." Other graduates will also receive the two above named heavier-than-air ratings. The successful officers of other branches of the service will be transferred to the Air Corps, while the 13 enlisted men and 132 civilians, training under the status of Flying Cadets, will be assigned to duty with Air Corps tactical squadrons for the period of one year. At the end of that time, provided their services have proven satisfactory, they are commissioned second lieutenants in the Air Reserve and, if the necessary funds are available, they are assigned to tactical squadrons for another year of active duty, this time under their status as Reserve officers.

In the matter of representation among the various States of native sons in the entering class of Flying Cadets at the Air Corps Training Center, the keen rivalry heretofore always existing between the States of California and Texas, still prevails, although a formidable contender - the State of Washington - has now entered the field. In the forthcoming July Class, Texas contributes 21 students, closely followed by California with 20 and Washington with 11.

The cities of Seattle and Los Angeles are tied for first place in contributing "local boys" to the new class, each having 5. Dallas and San Antonio, Texas, each have 4 representatives.

Roster of July Class at Primary Flying School

OFFICERS, AIR CORPS

Captain Karl S. Axtater	Osborn, Ohio
Captain Courtland M. Brown	Natick, Mass.
Captain Douglas Johnston	Alton, Ill.
1st Lieut. Uzal G. Ent	Northumberland, Pa.
1st Lieut. Reginald R. Gillespie	Spencer, Iowa
1st Lieut. Ralph E. Holmes	Walnut Creek, Calif.
1st Lieut. Wilfred J. Paul	White Plains, N.Y.
1st Lieut. John G. Salsman	Madison, Wis.

OFFICERS - OTHER BRANCHES

Second Lieutenants

Stephen O. Fuqua, Inf.	Washington, D.C.
Donald F. Buchwald, Inf.	Marshalltown, Iowa
Richard T. Coiner, Cav.	Washington, D.C.
Wm. J. Holzapfel, F. A.	Racine, Wis.
Charles E. Brown, Inf.	Cordele, Ga.
Edward G. Winston, Inf.	Maryland

FLYING CADETS - CIVILIANS

Howard F. Pringle, Jr.	Mobile, Ala.
John Clinton Williams	Sylacauga, Ala.
Beverly Pierce Head, Jr.	Tuscaloosa, Ala.
Albert N. Kluthe	Ansheim, Calif.
Jo K. Warner	Berkeley, Calif.
Clifford D. Maddux	Brawley, Calif.
John P. McClimont	Cambria, Calif.
James Lee Bledsoe	Los Angeles, Calif.
Burton Rolland Ellison	Los Angeles, Calif.
Lee M. Greenleaf	Los Angeles, Calif.
Gordon H. Pierce	Los Angeles, Calif.
Lawrence F. Converse	Glendora, Calif.
Hadley Vincent Saehlenou	Hollywood, Calif.
Frank E. Mears, Jr.	Monrovia, Calif.
Herman V. Estes	Palo Alto, Calif.
Paul Howard Dane	Pasadena, Calif.
William Waring Miller	San Diego, Calif.
Milton Scott Adair	San Francisco, Calif.
Thomas Kerne Hampton	San Marino, Calif.
Roy A. Seaver	Santa Ana, Calif.
Howard L. Buller	University, Calif.
Adam Joseph Heintz	Greeley, Colo.
H. L. Jackson	New Britain, Conn.
William George Graff	Washington, D. C.
Alton B. Moody	Washington, D. C.
Whitfield T. Scarboro	Tifton, Ga.
Winston Irving Jones	Moscow, Idaho
Donald Ellis Ridings	Moscow, Idaho
Homer Peterson	Potlach, Idaho
Vernon Donald Hansen	Chicago, Ill.
Charles F. Mudgett, Jr.	Chicago, Ill.
William James Pinkerton	Rushville, Ill.
Oscar H. Bizzelle	Urbana, Ill.
Charles Wesseler Bicking	Evansville, Ind.
Forrest Edmund Beeson	Indianapolis, Ind.
Gilbert Buren Baird	Kokomo, Ind.
John Oliver Bradshaw	West Lafayette, Ind.
Gordon Russell Kennel	Ames, Iowa
Norman C. Osher	Graettinger, Iowa
Bernard A. Te Paske	Orange City, Iowa
Elwin Lohse	Schleswig, Iowa
John L. Matthews	Kansas City, Kans.
William G. Montague	Ashland, Ky.
Charles W. Anderson	Louisville, Ky.
Robert Wilton Fausel	Louisville, Ky.
John William Glynn	Alexandria, La.

Cecil M. Hill	Columbia, Ia.	R. Rodney Massie, Jr.	Clifton Forge, Va.
John Bauer O'Brien	Cumberland, Md.	James W. Lindsay	Lovettsville, Va.
Aaron Hardy Ulm, Jr.	Brookline, Mass.	Harry Spack	Richmond, Va.
Robert Franklin Hardy	Flint, Mich.	George William Hogg	Bremerton, Wash.
Russell W. Luzius	Lincoln Park, Mich.	John Allison Pechuls	Pullman, Wash.
Herbert A. Peschel	Breckenridge, Minn.	James M. Erwin	Pullman, Wash.
Jack E. Hamilton	Duluth, Minn.	Joe Francis Radek	Puyallup, Wash.
George Edward Clausen	Minneapolis, Minn.	Ted Sinclair Faulkner	Seattle, Wash.
Paul John Gilloth	Minneapolis, Minn.	Paul J. McMahon	Seattle, Wash.
Maurice Dale	St. Cloud, Minn.	Robert Becke Powers	Seattle, Wash.
Vern L. McMurrin	St. Paul, Minn.	Vernon B. Thatcher	Seattle, Wash.
Vernon Alton Kelly	Anding, Miss.	Charles Richard Wheeler	Seattle, Wash.
Melville Whitnel Beardsley	Kansas City, Mo.	Willard Dudley Griffith	Spokane, Wash.
Blake Workman	St. Louis, Mo.	Thomas Eastman Sandegren	Tacoma, Wash.
Lloyd Eyre	Augusta, Mont.	Paul Frederick Fisher	Charleston, W. Va.
Edward F. Cullerton	Butte, Mont.	Lawrence E. Stewart	Montgomery, W. Va.
Richard Caldwell Shaw	Missoula, Mont.	Raymond T. Snider	Sharpless, W. Va.
George T. Richardson	Kearney, Neb.	Roy L. Thompson	Frederic, Wis.
George L. Gottschalk	Dayton, Nevada		
George Boyd Adamson	Reno, Nevada	FLYING CADETS - ENLISTED MEN, A.C.	
J. Robert Adams	Lincoln Park, N. J.	Pvt. 1st Cl. Clyde R. Russell	Chandler, Ariz.
Kevin Burke	Buffalo, N. Y.	37th Attack Squadron, Langley Field, Va.	
Lawrence K. Brooks	Clayton, N. Y.	Pvt. James Ferguson	Whittier, Calif.
Howard E. Jackson	New York, N. Y.	Station Complement, March Field, Calif.	
Anthony Abbatiello	Schenectady, N. Y.	Pvt. John N. Reynolds, Jr.	Los Angeles, Calif.
James G. Blair	Yonkers, N. Y.	53d School Squadron, Randolph Field, Texas	
William Lewis Curry	Raleigh, N. C.	Pvt. Walph W. S. Catlin	Bay City, Mich.
Roy William Osborn	Sanborn, N. D.	56th Service Squadron, Selfridge Field, Mich.	
Irwin W. Wander	Ashland, Ohio	Pvt. Fritz Krueger	Mt. Vernon, Ky.
Francis Horace McCrory	Bowling Green, Ohio	A.C. P.F.S. Det., Randolph Field, Texas	
Robert Daniel Armstrong	Cincinnati, Ohio	Pvt. Oscar Cohen	Orange, N.J.
Paul Weitzel Zehrung	Dayton, Ohio	Hqrs. Squadron, Randolph Field, Texas	
George E. Schaetzel	Mt. Healthy, Ohio	Pvt. Claude C. Moose	Allentown, Pa.
Roy M. Long	McAlister, Okla.	Station Complement, Langley Field, Va.	
Paul Franklin Helmick	Corvallis, Ore.	Pvt. Homer C. Ellette	Sturgis, S.D.
Royce G. Kunze	Detroit, Ore.	75th Service Sqdn., Wheeler Field, T.H.	
Richard Charles Merrick	Portland, Ore.	Pvt. Rhoe E. Harris	Cleburne, Texas
Howard F. Bronson, Jr.	Harrisburg, Pa.	62d Service Sqdn., Brooks Field, Texas	
Richard Dale McCloskey	Lancaster, Pa.	Pvt. Charles T. Chapman, Jr.	Corpus Christi, Tex.
Paul Stefan Balas	McKeesport, Pa.	53rd School Sqdn., Randolph Field, Texas	
Charles Milton Merriman	Wilmerding, Pa.	Pvt. Robert Leslie Grove	Dallas, Texas
Halbert Hammond Acker	Anderson, S.C.	53rd School Sqdn., Randolph Field, Texas	
Robert LeRoy Stroud	Chester, S.C.	FLYING CADETS, ENLISTED MEN, OTHER BRANCHES	
Thomas Jefferson Craig	Columbia, S.C.	Pvt. Albert J. Baumler	Trenton, N.J.
Wilkes S. Barnett	Greenville, S.C.	Co. B, 51st Sig. B'n, Fort Monmouth, N.J.	
Edward W. Ketcham	Madison, S.D.	Pvt. Wiley G. Wells	Morehead City, N.C.
Morris Gould Harrison	Chattanooga, Tenn.	26th Infantry, Plattsburgh Bks., New York	
Christopher G. Hopkins	Nashville, Tenn.	---oOo---	
Frank Van Noy	Amarillo, Texas		
Charles L. Caldwell	Austin, Texas	Major Carlyle H. Ridenour, Group Operations	
Ray Hamilton Martin	Austin, Texas	Officer, Hamilton Field, Calif., is pushing the	
Hugh Ruthler Hall	Dallas, Texas	100-hour recommendations of the War Department,	
Wonderful Agib Trembly	Dallas, Texas	as laid down in Circular No. 6. All pilots of	
John Clark Wilder	Dallas, Texas	the 11th Bombardment Squadron have qualified,	
Wilbur Ralph Mahan	Denton, Texas	and the pilots of the other organizations will	
William Renwick Nevitt	Houston, Texas	be qualified before the end of the Fiscal Year	
Harvey Haydon Whitfield	Houston, Texas	1935. Major Ridenour selected Captain C.B.	
James Harvie Patman	Hughes Springs, Texas	Stone, III, and Lieuts. William Ball and	
Alton B. Williamson	Pearsall, Texas	Richard C. Lindsay to act as his assistants in	
Glenn S. Fikes	San Antonio, Texas	this flying training schedule.	
John Melvin Hansell	San Antonio, Texas	---oOo---	
Hilmer Luetcke	San Antonio, Texas		
Chester Lee Sluder	San Antonio, Texas	Effective July 1, 1935, there will be formed	
Robert L. Bullock, Jr.	Taylor, Texas	in the Office of the Chief of the Air Corps an	
James Marion Jones	Temple, Texas	additional division, to be known as the Reserve	
Edward Miles Strieber	Yorktown, Texas	Division, which will handle all affairs now	
James William Haws	Provo, Utah	handled by the Reserve Section, which is discon-	
		tinued, and, in addition, all Reserve Training	
		affairs now under the Training and Operations Div.	
		V-6817, A.C.	

B I O G R A P H I E S

Colonel Gerald C. Brant

Colonel Gerald C. Brant, Air Corps, Wing Commander, 3rd Wing, GHQ Air Force, was born at Chariton, Iowa, June 29, 1880. Appointed to the United States Military Academy, he graduated therefrom in June, 1904, was commissioned a second lieutenant, and assigned to the 9th Cavalry.

After serving 14 years in the Cavalry, he applied for transfer to the Aviation Section, Signal Corps, and was appointed Major, Signal Corps, August 5, 1917. Touching on his transfer to the Aviation Section, when interviewed several years ago by a newspaperman in Hawaii, he drily remarked that he did so in order to get into a "safe" branch of the service.

Immediately following his appointment in the Signal Corps, Colonel Brant was ordered to Kelly Field, Texas, for flying training, which was interrupted in December of that year by the influx of more than 30,000 troops, for whom no accommodations were available. Everyone had to turn to and see that they were sheltered, fed, inoculated, trade-tested, uniformed and organized into squadrons. In connection with this work he became successively Adjutant of the 2nd Training Brigade, Executive Officer of Kelly Field No. 2, and Executive Officer of the Southern Training District which comprised all the flying schools in the South.

In April, 1918, having completed his flying training, he was appointed Commanding Officer of Kelly Field No. 2. In June of that year he was ordered to Washington and became Chief of Operations, Office of the Director of Military Aeronautics. During the months of October and November, he held the position of Assistant Director of Military Aeronautics. He received the rating of Junior Military Aviator as of November 15, 1918, and the rating of Airplane Pilot as of October 5, 1920.

Following the signing of the Armistice, Colonel Brant was named Chairman of the committee appointed to organize the Air Service on a peace-time basis.

Transferred from Washington early in 1919, for station at Ellington Field, Houston, Texas, he served as commanding officer of that field from February 6 to May 17, 1919, when he was assigned to duty as Department Air Officer, Eastern Department.

In the New York to Toronto Air Race in the Fall of 1919, Colonel Brant finished in second place. He also participated that year in the Transcontinental Reliability Test Race, but a broken oil pump caused him to crash in the Catskill Mountains, as a result of which he suffered several broken ribs.

Colonel Brant graduated from the Army School of the Line in 1921, from the General Staff School in 1922, and from the Army War College in 1923. From June 29th of the latter year until September 8, 1926, he served as a member of the War Department General Staff. His next assignment was that of Executive Officer in the Office of the Assistant Secretary of War for Aeronautics, a position he occupied until November 10, 1927, when he assumed command of Crissy Field, Presidio of San Francisco, Calif. He was promoted to Lieut.-Colonel, September 27, 1928.

In February, 1930, Colonel Brant was transferred to Mitchel Field, L.I., New York, where he served as Executive Officer of the 9th Observation Group. In September, 1930, being due for foreign service, he was transferred to the Hawaiian Department, where he served as Commanding Officer of the 18th Composite Wing and as Air Officer of the Hawaiian Department. This constituted his second tour of duty in Hawaii, although his first tour was of brief duration, he having been sent to the Islands from Washington in 1925 to command the defending Air Forces during the joint Army and Navy Maneuvers in that year.

Colonel Brant's tour of duty in Hawaii was extended to August, 1934, when he was assigned to Brooks Field, San Antonio, Texas, as Commanding Officer of the 12th Observation Group. In February, 1935, he was transferred to his present station, Barksdale Field, Shreveport, La., as Commanding Officer of the 3rd Wing, GHQ Air Force, with the temporary rank of Colonel.

Lieut.-Colonel Follett Bradley

Lieut.-Colonel Follett Bradley, Air Corps, Assistant Chief of Staff, G-2, GHQ Air Force, Langley Field, Va., was associated with military aviation in its early days for, as far back as 1912, he made several flights in the early Wright biplane at Fort Riley, Kansas, in connection with experiments in the conduct of Field Artillery fire. He was deeply interested in Army aviation practically at its very inception, and on several occasions made application for detail in the Aviation Section, Signal Corps, but the exigencies of the service were such that, while he served with this branch for some months during the course of his duty with the A.E.F. overseas, it was not until July 1, 1920, that he was permanently transferred to the Air Service with the rank of Major.

Col. Bradley was born at Omaha, Nebraska, February 12, 1890. Graduating from the United States Naval Academy, June 4, 1910, he was commissioned Ensign, and served in the Navy until January 24, 1912, when he accepted a commission as second lieutenant of Field Artillery, U.S. Army. He

was promoted to 1st Lieutenant, July 1, 1916, and to Captain, May 15, 1917. From June 20, 1914, to August 13, 1917, he served a detail in the Ordnance Department, during the course of which time he graduated from the Ordnance School of Application.

In the World War, Col. Bradley held the temporary rank of Major, Field Artillery, National Army, from July 9, 1918, to August 30, 1918, and that of Lieut.-Colonel from the latter date to February 13, 1920, when he reverted to his regular rank.

During the year 1916, Col. Bradley learned to fly at Mineola, L.I., New York, in his own time and at his own expense. In August, 1917, he was ordered to duty overseas, serving under the Air Commander, A.E.F., Zone of Advance, on duty connected with the armament of airplanes and aerial gunnery. During his service overseas, he piloted Curtiss, Nieuport, Spad and DeHavilland type airplanes. On November 26, 1917, he passed the examination for the rating of Junior Military Aviator, and he received this rating as of that date.

Relieved from duty with the Air Service on January 10, 1918, Col. Bradley was assigned to the 17th Field Artillery. In September, 1918, he returned to the United States and was placed on duty as Instructor at the Artillery School of Fire at Fort Sill, Oklahoma. During the course of his service at this post, he held at different times the positions of Director, Artillery School of Fire; Officer in Charge of Flying; Commandant, Air Service Observation and Communications School, and Executive Officer of that School. In the meantime, he availed himself of every opportunity to keep in flying practice, and passing the examination for the rating of Airplane Pilot, he received this rating on August 12, 1920.

In August, 1921, Col. Bradley was assigned to duty as student at the Air Service Engineering School at McCook Field, Dayton, Ohio, and upon his graduation therefrom in August of the following year, was transferred to Chanute Field, Rantoul, Ill., for duty as Assistant Commandant of the Air Service Technical School.

Transferred to duty in the Panama Canal Department in August, 1923, he served in the dual capacity of Commanding Officer of France Field and the 6th Composite Group. He also served for a time as Air Officer of the Panama Canal Department. Upon the completion of his tour of duty in Panama, he was, in September, 1926, assigned as student at the Air Corps Tactical School, then at Langley Field, Va. Graduating the following year, he continued in the capacity of student for another year, this time at the Command and General Staff School at Fort Leavenworth, Kansas. He then returned to Langley Field for duty as Instructor at the Tactical

School, and held also the position of Director of Instruction.

While stationed at Chanute Field, Col. Bradley participated as pilot in the Pulitzer Air Races held in the Fall of 1922 at Selfridge Field, Mt. Clemens, Mich., and took second place in the contest for the Liberty Engine Builders' Trophy.

During the period from August, 1931, to June, 1933, he was again on duty as student, completing the one-year courses at the Army War College, Washington, D.C., and the Naval War College at Newport, R.I.

In June, 1933, Col. Bradley was assigned to duty at Mitchel Field, N.Y., as Commanding Officer of the 9th Observation Group. When the Army Air Corps took over the operation of the Air Mail, February - June, 1934, he served in the capacity of Chief Inspector. In June, he was detailed as a member of the War Department, General Staff, and assigned to the War Plans Division, remaining on this duty until March 1, 1935, when he was assigned to duty at the Headquarters of the GHQ Air Force, Langley Field, Va., as Assistant Chief of Staff, G-2, with the temporary rank of Lieut.-Colonel.

---oOo---

PHOTOGRAPHIC RECORD OF AERIAL BOMBING

The 11th Photo Section, stationed at Wheeler Field, T.H., made a photographic record of the high altitude bombing recently conducted at Waimanalo. The photographic plane took off from Wheeler Field at 7:00 a.m., and arrived at Waimanalo 30 minutes later. The final bombing schedule was obtained, and contact was maintained with the radio station at Bellows Field, so that the photographic flights were coordinated with the bombing. Photographs of the actual explosions were obtained of every bomb dropped during each phase. After the phases were completed, a vertical photograph of the target was taken, showing the disposition of the various bombs.

During the entire bombing, men stationed on the observation hill took a complete record of the test with a 16 millimeter movie camera. These films are on file with the 11th Photo Section.

During the complete test, the total time flown was 5 hours, 55 minutes, in 5 flights. The total number of aerial exposures made was 50, and 45 prints were made of the results for file and future use.

No trouble was experienced in catching the bursts on the target. The distance flown from the target varied with the size of the bombs. On some of the smaller bombs the airplane was so close to the actual detonation that blurring of the photographs resulted. Had a photographic airplane of the Fairchild C-8 type been available, a longer focal length camera could have been used with much better results as to clarity and size.

INCREASE IN ENLISTED STRENGTH OF THE AIR CORPS

As a result of the provision in the Army Appropriation Bill, for the Fiscal Year ending June 30, 1936, increasing the enlisted strength of the United States Army by 46,250 enlisted men, there was allotted to the Air Corps, effective July 1, 1935, a total of 1442 additional privates to bring up its total enlisted strength to 16,000, including 365 Flying Cadets. Provision was also made by the War Department for the allotment of 344 additional Quartermaster and Signal Corps men to Air Corps stations.

The distribution of these additional enlisted men to Air Corps fields and stations is given below, as follows:

FIRST CORPS AREA

<u>Boston, Mass.</u>	<u>Increase</u>
1st Corps Area Air Corps Det.	4

SECOND CORPS AREA

<u>Mitchel Field, N.Y.</u>	
Det. 4th Sig. Service Company	7
Detachment, Quartermaster Corps	12
97th Observation Squadron	1
9th Bombardment Group Headquarters	4
Station Complement	75

<u>Governors Island, N.Y.</u>	
2nd Corps Area A.C. Detachment	3

THIRD CORPS AREA

<u>Bolling Field, D.C.</u>	
Det. 16th Signal Service Company	7
Detachment, Quartermaster Corps	11
100th Service Squadron	50
Station Complement	80

<u>Burgess Field, Pa.</u>	
Det. 16th Signal Service Company	1

<u>Fort Humphreys, D.C. (A.W.C.)</u>	
Det. 16th Signal Service Company	3

<u>Langley Field, Va.</u>	
Det. 16th Signal Service Company	12
Detachment, Quartermaster Corps	20
Hq. and Hq. Sqdn. GHQ Air Force	100
2nd Bombardment Group Hqrs.	4
33rd Pursuit Squadron	4
35th Pursuit Squadron	4
36th Pursuit Squadron	4
37th Attack Squadron	4
Station Complement	93

<u>Aberdeen Proving Ground, Md.</u>	
Air Corps Detachment	5

<u>Middletown Air Depot, Pa.</u>	
2nd Transport Squadron	15

<u>Baltimore, Md.</u>	
3rd Corps Area Air Corps Det.	5

FOURTH CORPS AREA

<u>Barksdale Field, La.</u>	
Det. 5th Signal Service Company	4
Detachment, Quartermaster Corps	15
8th Attack Squadron	4
13th Attack Squadron	4
90th Attack Squadron	4
55th Pursuit Squadron	4
77th Pursuit Squadron	4
79th Pursuit Squadron	4
Station Complement	51

<u>Fort McPherson, Ga.</u>	
4th Corps Area Air Corps Det.	8

4TH CORPS AREA (Cont'd)

<u>Maxwell Field, Ala.</u>	<u>Increase</u>
Det. 5th Signal Service Company	4
Detachment, Quartermaster Corps	5
A.C. Tactical School Detachment	99
51st Attack Squadron	4
87th Pursuit Squadron	4

FIFTH CORPS AREA

<u>Fairfield Air Depot, Ohio.</u>	
Flight "A", 1st Transport Squadron	15

<u>Wright Field, Ohio.</u>	
Flight "B", 1st Transport Squadron	15

<u>Fort Hayes, Ohio.</u>	
5th Corps Area Air Corps Detachment	10

SIXTH CORPS AREA

<u>Chanute Field, Ill.</u>	
Det. 6th Signal Service Company	4
Detachment, Quartermaster Corps	5
98th Service Squadron	2
48th Pursuit Squadron	4
A.C. Technical School Detachment	24
Unassigned Students	250

<u>Chicago, Ill.:</u>	
Det. 6th Signal Service Company	6
Det. Co. A, 3rd M.R. Bn.	22
6th Corps Area Air Corps Detachment	1

<u>Scott Field, Ill.</u>	
Det. 6th Signal Service Company	5
Detachment, Quartermaster Corps	8
Station Complement	105

<u>Selfridge Field, Mich.</u>	
Det. 6th Signal Service Company	5
Detachment, Quartermaster Corps	12
17th Pursuit Squadron	4
27th Pursuit Squadron	4
94th Pursuit Squadron	4
Station Complement	88

SEVENTH CORPS AREA

<u>Omaha, Neb.</u>	
7th Corps Area Air Corps Detachment	4

EIGHTH CORPS AREA

<u>Brooks Field, Texas.</u>	
Det., 7th Signal Service Company	6
Detachment, Quartermaster Corps	13
62d Service Squadron	1
Station Complement	49

<u>Dryden, Texas.</u>	
Det., 7th Signal Service Company	1

<u>Kelly Field, Texas.</u>	
Det. 7th Signal Service Company	12
Detachment, Quartermaster Corps	10

<u>Marfa, Texas (Fort D.A. Russell)</u>	
Det., 7th Signal Service Company	4
Detachment, Quartermaster Corps	30

<u>Randolph Field, Texas.</u>	
Det., 7th Signal Service Company	2
Detachment, Quartermaster Corps	8

<u>San Antonio Air Depot</u>	
3rd Transport Squadron	15

<u>Fort Sam Houston</u>	
8th Corps Area Air Corps Detachment	15

NINTH CORPS AREA

<u>Rockwell Air Depot</u>	
4th Transport Squadron	15

NINTH CORPS AREA (Continued)	
<u>Hamilton Field, Calif.</u>	Increase
Det., 8th Signal Service Company	7
Detachment, Quartermaster Corps	20
7th Bombardment Group Headquarters	4
Station Complement	46
<u>March Field, Calif.</u>	
Det., 8th Signal Service Company	9
Detachment, Quartermaster Corps	17
34th Attack Squadron	4
73rd Attack Squadron	4
95th Attack Squadron	4
<u>Rockwell Field, Calif.</u>	
Det., 8th Signal Service Company	5
Detachment, Quartermaster Corps	12
19th Bombardment Headquarters	4
Station Complement	61
<u>Crissy Field, Calif.</u>	
91st Observation Squadron	25
<u>Presidio of San Francisco, Calif.</u>	
9th Cor Area A.C. Detachment	10
<u>Recapitulation:</u>	
Air Corps Enlisted Men -	1,442
Signal Corps Enlisted Men -	104
Quartermaster Corps Enlisted Men -	198
Motor Repair enlisted men	22
Total	1,766
---oOo---	

NEW STUDENT CLASS AT AIR CORPS TACTICAL SCHOOL

The following-named Air Corps officers have been assigned to duty as students in the next class at the Air Corps Tactical School at Maxwell Field, Montgomery, Ala.:

MAJORS

William E. Kepner Raymond E. O'Neill

CAPTAINS

Orvil A. Anderson	Aaron E. Jones
Eugene B. Bayley	Newton Longfellow
Levi L. Beery	Alfred J. Lyon
Hugh A. Bivins	Harold M. McClelland
John K. Cannon	Harold A. McGinnis
Harold L. Clark	George V. McPike
John M. Clark	Richard H. Magee
Samuel M. Connell	Merrill D. Mann
Joseph H. Davidson	Russell L. Maughan
Lewis A. Dayton	Leland W. Miller
Claude E. Duncan	William C. Morris
Ira C. Eaker	Edward M. Powers
Donald D. FitzGerald	Max F. Schneider
Thad V. Foster	Leon E. Sharon
Dale V. Gaffney	Edgar P. Sorenson
Harry A. Halverson	Charles E. Thomas, Jr.
Earl S. Hoag	Bernard J. Tocher
Charles A. Horn	Kenneth B. Wolfe
Cortlandt S. Johnson	

FIRST LIEUTENANTS

Charles H. Caldwell	Thomas M. Lowe
Lawrence J. Carr	Don W. Mayhue
Benjamin W. Chidlaw	Ernest S. Moon
Alden R. Crawford	William D. Old
James T. Cumberpatch	James E. Parker
John H. Dulligan	Donald B. Phillips
Ford L. Fair	Elwood R. Quesada
Homer W. Ferguson	Augustine F. Shea
Carlisle I. Ferris	Ralph A. Snaveley
Albert F. Glenn	Nathan F. Twining
Edmund C. Langmead	

COLONEL McCHORD TOURS SOUTH AMERICA By the News Letter Correspondent

Like the fireman who put on "cits" and spent the day hanging around the engine house, Colonel William C. McChord, Commanding the 19th Composite Wing, Air Corps, Albrook Field, Canal Zone, took 25 days' leave during May and spent the whole period flying.

Cross-country flying in the Panama Canal Department is extremely limited, being confined to frequent short trips over the Panamanian jungles and an organizational flight to some adjoining Central American country. Flights outside of the Republic of Panama require diplomatic authority and they are infrequent.

So Colonel McChord decided to see South America as a passenger on the Pan-American - Grace Airways. During a period of 24 days, the Wing Commander covered approximately ten thousand miles. The itinerary of his flight included stop-overs for very brief periods at Guayaquil, Colombia; Lima, Peru; Antofagasta, Chile; Montivideo, Uruguay, and Buenos Aires, Argentina. Colonel McChord pronounced the trip as most interesting and instructive. He complained bitterly, however, that in order to make his schedules he was forced to arise almost every morning at 4:00 a.m. in a cold hotel room.

The traveler was greatly impressed with the progress already made by commercial aviation in South America. "The people of South America," he said, "are now reaching in a few hours remote sections of the country which a few years ago were reached only after tedious journeys requiring days and sometimes weeks. While the amount of commercial aviation in South America is impressive, the field has been by no means fully developed. Agents of our own and foreign manufacturers are on the job, and the near future is certain to see increased development of commercial aviation throughout South America."

---oOo---

TEMPORARY PROMOTIONS

To Major

Captain Walter B. Hough, June 30, 1935, as Executive Officer, Station Complement, Hamilton Field, Calif.

Captain Robert Olds, June 30, as Asst. to Asst. Chief of Staff, G-2, GHQ Air Force, Langley Field.

Captain Christopher W. Ford, June 17, C.O., 3d Pursuit Squadron, Clark Field, P.I.

Captain Orlo H. Quinn, C.O., 58th Service Sqdn. Langley Field, Va., June 19, 1935.

Captain Ralph H. Wooten, June 30, as Asst. to Asst. Chief of Staff, G-4, GHQ Air Force, Langley Field, Va.

To Lieutenant-Colonel

Major Henry J.F. Miller, June 18, as Air Officer, Sixth Corps Area.

Major Horace N. Heisen, June 20, as Commander, Station Complement, Rockwell Field, Calif.

To Captain

1st Lt. Thomas W. Steed, Operations Officer, 3rd Pursuit Squadron, Clark Field, P.I., June 17.

1st Lt. Wm. P. Sloan, June 20, Commander, Flt. A, 13th Attack Squadron, Barksdale Field, La.

V-6817, A.C.

ROSTER OF JUNE, 1935, GRADUATING CLASS FROM AIR CORPS ADVANCED FLYING SCHOOL

Officers

Captain Edgar P. Sorenson, Air Corps (Bomb.)
 1st Lieut. John J. Keough, Air Corps (Attack)
 2nd Lieut. John B. Ackerman, Coast Artillery Corps (Obs.)
 2nd Lieut. Clayton E. Hughes, Field Artillery (Pursuit)
 2nd Lieut. Edward H. Hale, Field Artillery (Obs.)

Flying Cadets

Attack Pilots

Robert P. Brush South Pasadena, Calif.
 Moultrie P. Freeman Clinton, S.C.
 George W. Hazlett Tarentum, Pa.
 Charles D. Jones Jackson, Miss.
 Preston P. Pender Hendersonville, N.C.
 Robert G. Polhamus San Marino, Calif.
 Charles T. Raines Vienna, Ga.
 James L. Travis Portland, Ore.
 Don M. Wood Eaton, Colo.

Bombardment Pilots

Claude B. Adair Columbia, S.C.
 Paul E. Amspaugh Cleveland, Ohio
 Frank W. Brendle Dallas, Texas
 Blaine B. Campbell Salt Lake City, Utah
 William E. Davis, Jr. Wilmington, N.C.
 John W. Graham Fort Worth, Texas
 Sam H. Hale Greenville, S.C.
 Mathias F. Junger Cincinnati, Ohio
 Herbert Morgan Jr. Freedom, Pa.
 Benjamin J. Pearson Seattle, Wash.
 Alton T. Peterson Bridgeport, Conn.
 James A. Philpot Pomona, Calif.
 William P. Ragsdale, Jr. McAllen, Texas
 Wilkie A. Rambo Gonzales, Texas
 Robert R. Reed Oklahoma City, Okla.
 Clarence L. Schmid Palo Alto, Calif.
 Emil S. Scott Jourdan, Texas
 Douglas W. Smith Los Angeles, Calif.
 Thomas S. Terrill Pasadena, Calif.
 James F. Whisenand Los Angeles, Calif.
 Paul B. Williamson Peoria, Ill.

Observation Pilots

Kenton, Ohio
 Southern Pines, N.C.
 Seattle, Wash.
 Knoxville, Tenn.
 Athens, La.
 Ann Arbor, Mich.
 Beavertown, Va.
 Salt Lake City, Utah
 Vashon, Wash.
 Little Fork, Minn.
 Bellevue, Pa.
 Venice, Calif.
 Cooper, Texas
 Gilbert, Ariz.
 Spokane, Wash.
 Baltimore, Md.

Pursuit Pilots

David C. Barrow, Jr. DeSoto City, Fla.
 Earl E. Bates Winnetka, Ill.
 Jack W. Berry Corvallis, Ore.
 Irving L. Branch Glenbrook, Conn.
 William B. David Calhoun, Ga.
 Donald S. Dunlap North East, Pa.
 Joseph F. Feaganes Wytheville, Va.
 Kenneth W. Lawver Freeport, Ill.
 Frederick C. Long Palouse, Wash.
 Elmer E. McKeesson Richmond, Va.
 Jack S. Marks Los Angeles, Calif.
 William M. Reeder Atlanta, Ga.
 Richard P. Schumacher Los Angeles, Calif.
 Allan J. Stewart, Jr. Murfreesboro, Tenn.
 Charles E. V. Smith Hastings, Neb.
 John C. Ziler Huntington Park, Calif.
 Donald R. Strother Maryville, Mo.

The Attack Pilots among the graduated Flying Cadets were assigned to station at Barksdale Field, Shreveport, La.; Bombardment Pilots to Langley Field, Va.; Observation Pilots to Mitchel Field, N.Y., and Pursuit Pilots to Selfridge Field, Mt. Clemens, Mich. Four Cadets among the Observation pilots, Messrs. Haugen, Hudgens, Wilbur and Wilson, are assigned to the 12th Observation Group at Brooks Field, Texas.

The officer graduates are assigned to stations, as follows: Major Sorenson as student at the Air Corps Tactical School, Maxwell Field, Ala.; Lieut. Keough to Chanute Field, Ill.; Lieuts. Ackerman, Hughes and Hale to Maxwell Field, Montgomery, Ala.





The following items have been published to the personnel of the GHQ Air Force through the medium of Air Force Bulletins issued by the Air Force Headquarters:

NO PEACE AND WAR STRENGTH TABLES OF ORGANIZATION: For the present period of test of the GHQ Air Force, there has been established but one set of tables of organization, - not two, peace and war. This is necessary for an M-day air force. The high technical skill required to perfect the teamwork essential to an air organization in the performance of a mission demands a continuous day to day peace time existence on the same basis as will obtain upon the outbreak of war. The efficiency of any air unit would be seriously reduced if it were required to undergo a violent period of transition from a peace status to a war status.

MOBILITY: a. Mobility for the GHQ Air Force is its capacity to reach the required theater of operations, and operate therein. The degree of its mobility is measured by the shortness of the time required to effect the movement of the tactical units, and to perfect the required logistical organization for shelter, subsistence, supply, maintenance, and communications.

b. Note carefully that the prompt movement of combat units to destination, though important, is but a part of strategic mobility. In addition to this movement of combat units, it is necessary so to establish and develop the service of supply and maintenance as to be ready for the combat units upon their arrival. To do this, it is necessary for all supply services to move their stocks, and establish their labor at the points of consumption required by the combat units concurrently with the movement of these units. Mobility of supply is coequally essential to mobility of combat units.

SHELTER, SUBSISTENCE AND OTHER SERVICES: There are three methods by which shelter, subsistence and other services necessary to GHQ Air Force units in the field may be provided. They are:

a. Case I. Utilization of local civilian agencies. Shelter for personnel to

be contracted for in hotels, boarding houses, warehouses, public buildings, etc. Feeding to be accomplished by restaurants, contract with caterers, etc. Transportation and trucking by contract with trucking companies, hire of boats, automobiles, servicing trucks, airplanes and public carriers. Communications by toll, lease and contract with telephone and telegraph companies. Hospitalization, medical attention, and funerals by contract with civilian hospitals, doctors and undertakers, respectively. Similarly, all other necessary services that can be arranged and paid for locally, should be utilized.

b. Case II. Utilization of facilities normally provided for other arms by the War Department, such as shelter and food by the Quartermaster Corps, communications by the Signal Corps, medical attention and hospitalization by the Medical Corps.

c. Case III. Utilization of special equipment and methods developed by the Air Corps for its own use. Such special equipment includes the lightweight Air Corps tent, the sleeping bag, the gasoline field range, the drum servicing units, the five-gallon gasoline and oil can, the light tractor, the field lighting units, etc., all transportable by air.

DISCUSSION OF CASES: It will probably be seldom that a concentration of the entire GHQ Air Force can be served exclusively by any one of the three cases described above. However, in some situations, squadrons and groups may be served exclusively according to the case most applicable.

a. Case I. The utilization of local civilian agencies where they exist in whole or in part should be the most efficient, satisfactory, and economical. Modern airplanes require hard surfaces for operations. Prepared hard surfaced airdromes are found ordinarily only near civilian communities or at Army permanent stations. These communities and Army stations nearly always have nuclei of most of the facilities mentioned under Case I. These nuclei can be readily adapted or expanded to meet the needs of Air Force units operating therefrom. However, even though service under Case I

may be most efficient and satisfactory, training under the other cases must be secured in peace time so as to be ready to operate thereunder in war when necessity so requires. Furthermore, even though Case I may be more economical, peace time appropriations so far have not been available under appropriate procurement authorities to permit wide application of this method. Accordingly, for the present at least, many of our peace time exercises and maneuvers must be served under Cases II and III, - at least in large part.

b. Case II. To operate under Case II requires cooperation on the part of all Theater and Corps Area Commanders in or through whose areas GHQ Air Force units operate. The staffs of the GHQ Air Force units concerned must anticipate their needs and work in close cooperation with the staff of the commander furnishing the service. Shelter, mess equipment, supplies, transportation, labor, etc., must be furnished by the commanders concerned, and delivered by them to the points of use by the tactical units. As GHQ Air Force units in war will usually operate from prepared bases far removed from ground troops and their service establishments, it seems unwise to complicate their logistical plans by requiring Corps Area commanders to serve GHQ Air Force units unless necessity so dictates. Furthermore, should the Corps Area commanders be required to serve the GHQ Air Force, they must grant it first priority, because it is an M-day force. To do so would probably place an intolerable burden on their facilities, already scarcely adequate to meet the demands of a general mobilization. In the abnormal case where there are no civilian facilities, or where they may have been obliterated by enemy action, Case II combined with Case III must be utilized, and will become normal.

c. Case III. In war, if and when the possibilities of Cases I and II have become exhausted, the GHQ Air Force must depend on such equipment and methods as the Air Corps may develop to permit the use against the enemy of the last airplane that can be flown. To be prepared to meet this situation, and to permit operations under Case III, will require intensive development and modification through actual use in field exercises and maneuvers, of the many items exemplified in paragraph 5c above. While these items will be developed primarily to meet the needs of last ditch resistance, many of them will be used under Cases I and II.

d. As operations under any one or combination of the three cases will present problems to be solved, peace time exercises and maneuvers must be held under all cases and combinations thereof. In that way only will a smoothly

functioning system be developed ready for immediate operation on M-day.

TRANSPORT: a. The Air Force to make maximum use of its inherent mobility must be as free as possible of ground agencies of transport, both for personnel and materiel. To this end the cargo transport has been developed for supply and maintenance purposes. This is strictly an agency of the service of supply and as such is vitally essential to the maintenance of combat units in the field. It therefore should never be diverted from its primary mission, except for brief periods of time to carry a peak load requirement of combat commanders, after which it should revert to its supply and maintenance employment.

b. In addition to the cargo transport airplanes of the supply service, personnel transports are provided to combat units. They normally remain under the control of tactical commanders. These transports are assigned to service squadrons to assist in the operation, supply and maintenance of the groups they support. Personnel transports are normally the same types as the cargo transports.

COMMUNICATIONS: The problem of communications under conditions that require the maximum mobility and/or dispersion is difficult of solution. The Air Force command net will maintain contact between the Air Force commander and the Wings and Groups within the capacity and limitations of radio communication. Augmentation of this means with and between these and lower units will involve wire and messenger. The physical limitations of radio and wire service may compel the liberal use of airplane courier, particularly for the transmission of written field orders.

TRAINING: In order that the Air Force may become welded into a powerful entity, it is essential that it be developed upon a firm foundation of properly trained echelons of command. To this end, field training will be a normal progression from squadron to group, to Wing, and finally to the fully developed Air Force. Each subordinate unit will be required to demonstrate its fitness to become a unit of the next higher organization. Small steps first, and a demonstration of lessons learned will be the method by which this will be accomplished.

INSPECTIONS: a. To make certain that the Air Force is in a state of readiness commensurate with its available equipment and personnel, inspections will be made at the proper times and places. To accomplish this, instructions have been issued which require adherence to existing procedure and a facing of actualities. The object of such inspections will be primarily to discover and remedy shortcomings in training and equipment, rather than to demonstrate how good the organization is. These inspections should not be confused with technical inspections, which will continue as in the past to be made under

the supervision of the Chief of the Air Corps.

b. Field inspections will be conducted in two distinct phases.

(1) By ordering the organizations into the field, as they exist, for the purpose of conducting inspections to determine the status of their equipment upon which they will have to depend for short periods of time while out of touch with their service squadrons;

(2) By pooling the resources of a senior organization to completely organize and equip a junior organization, so that it can take the field at full strength, supported by the service squadron or a suitable section thereof; this full strength organization to maintain itself and operate, for an indefinite length of time, for the purpose of determining the changes required in the tables of organization and equipment.

(3) The first phase can be most expeditiously accomplished either on or in close proximity to the home station. The second phase will require the occupation of an airdrome or area reasonably distant from the home station.

EQUIPMENT: The fact must be kept constantly in mind that the various supply branches of the Army are as vitally concerned in operations, maintenance and inspections as are Air Corps units. Methods of storage and issue employed by the supply branches will be subject to severe criticism, if they are not capable of executing their supply function without delaying or hampering the operations of combat units. Combat personnel can no longer be called upon to do the great amount of warehousing, inspection, maintenance, etc., of supplies that has been customary in the past. It is essential that the Quartermaster, for instance, have his stock of field equipment so arranged that it can be issued upon 24 hours notice, to any organization requiring it, and be prepared to receive it back for repair and maintenance upon termination of the requirement. Combat units will not retain in their possession the field equipment furnished by the various supply agencies. This equipment will be warehoused by the responsible branches, ready for issue on short notice.

---00c---

TEXAS FLOODS

In the past few weeks Texas has experienced record-breaking floods in the central and southern portions of the State. Towns as large as Austin, Del Rio and Uvalde have been seriously damaged by the floods and highways, and railroads have been washed out in almost every direction. Communities and many families have been isolated by the rising waters which have caused scores of deaths and a tremendous amount of damage.

Kelly Field received numerous requests for assistance. On the evening of June 15th, the Mayor of Crystal City, Texas, telephoned to this station requesting that an immediate reconnaissance be made of the south side of the Nueces River, opposite Crystal City, to determine if any families were in immediate danger. Captain O.P. Weyland and 1st Lieut. F.H. Smith, who were practicing instrument flying in two BT airplanes, were recalled to this station by radio and sent on this mission. By the use of drop messages they communicated with those families in the danger area and dispatched a motor boat to their assistance. On the way home they dropped a message to the Mayor of Crystal City, who, using the Red Cross emergency code, replied that their messages had been understood. All of the families thus informed were able to escape without the loss of any lives.

On June 18th, Mr. Cecil Graham requested that an airplane from Kelly Field drop a message to the family of Mr. Charlie Mangum, who were living on

a ranch, 25 miles south of Fowlerton, which was in the path of flood waters of which they had no warning. First Lieut. R.D. Butler was dispatched with the message and, although it was dark before he reached Fowlerton, he located the house and dropped them the information.

Towns in the vicinity of Uvalde, particularly those to the North, were seriously damaged by the flood. Camp Wood was completely isolated, and provisions were badly needed. The necessary food supplies were obtained from the Red Cross agency in San Antonio and hauled to Kelly Field, where they were loaded into the specially designed containers for dropping such foodstuffs. After loading about 500 pounds of these supplies in each of two Bombers, Major R. D. Knapp and 1st Lieut. F.S. Stocks, the pilots, took off to deliver same. Major Knapp was accompanied by Private, 1st Class, W.B. Verbillion as radio operator; Corporal Jack Riley as crew chief, and Staff Sergeant Leo Post, who attended to the work of dropping the parachutes containing the food supplies. Flying with Lieut. Stocks were Staff Sgt. H.L. Chestnut, photographer; Corporal J.L. Crady, crew chief, and Pvt. E.P. Taylor, who handled the parachutes.

Arriving at Camp Wood, they delivered the bread, sugar, beans, potatoes, bacon, and other supplies, which received a hearty welcome from the inhabitants. Since it was impossible to reach Camp Wood except by air, the delivery of these supplies undoubtedly saved considerable suffering and possibly deaths from lack of food.

BIOGRAPHY OF GENERAL WESTOVER

The senior Assistant Chief of the Air Corps, Brigadier General Oscar Westover, will complete his four-year tour of duty as Assistant Chief next December. General Westover was born at West Bay City, Mich., July 23, 1883. After graduating from High School, he entered the Army as an enlisted man on September 4, 1901, and served with Company "K," 3rd Battalion of Engineers, until June 15, 1902, when he entered West Point as a cadet. He graduated from West Point on June 12, 1906, and was assigned to the 14th Inf.

General Westover remained with the Infantry through the grades of Second and First Lieutenant, in each of which he served five years. During this period he served tours of duty in the Philippines and in Alaska, and detached service at the United States Military Academy, where he served first as Instructor and later as Assistant Professor of Drawing. His marksmanship won for him the Distinguished Marksman's Medal, and membership on the Infantry Rifle Team at the National Rifle Matches at Camp Perry in 1911. He was promoted to temporary Major in the Signal Corps on October 20, 1917, and assigned to duty in charge of the Signal Office at the Port of Embarkation, Hoboken, N.J. In June, 1918, he was assigned to the Bureau of Aircraft Production in charge of Storage and Traffic, receiving his promotion to Lieutenant-Colonel, Air Service, August 14, 1918. In November, 1918, he was appointed Assistant Executive, Bureau of Aircraft Production, Washington, D.C., which office he held until July, 1919, when he was appointed Executive in the Office of the Chief of Air Service.

General Westover's outstanding service during the World War was recognized by the award of the Distinguished Service Medal, and his promotion to the grade of Colonel (emergency) on May 24, 1919.

In October, 1920, General Westover was assigned to take training at Omaha, Neb., and Ross Field, Calif. Upon graduation from the Balloon School at Ross Field with the rating of Balloon Observer, in 1921, General Westover was reassigned to duty in Washington as Chief, Balloon and Airship Division, Office, Chief of Air Service. While holding this position, he served on detached status for the purpose of participation, as aide, to Col. Lahm, in the National Balloon Race at Birmingham, Ala. He attended the Airship School at Langley Field, Va., from which he graduated in 1922 as Airship Pilot; and participated in the National Elimination Free Balloon Race at Milwaukee, Wis., which race he won by traveling to the vicinity of Lake St. John, Quebec Province, Canada, - a distance of 866 miles (almost twice the distance of the nearest competitor) in 16½ hours. He later represented the United States in the International

Gordon Bennett Balloon Race, which started at Geneva, Switzerland, in August, 1922, and which resulted in his detention in Hungary, where he was forcibly hauled down, while drifting low to obtain favorable winds, by peasants seizing the drag rope, and thereupon investigated by the gendarmes and other Hungarian authorities for violating Admiral Horthy's edict prohibiting the flight of foreign aircraft over Hungary.

In February, 1921, General Westover was appointed Director of Aircraft Production charged with the liquidation of the United States Spruce Production Corporation, a wartime production agency, a position which he has held continuously since that date, except for the period from July, 1928, to 1932.

In 1924 he was Executive Officer at Langley Field, Va., later in the year becoming the Commanding Officer of that Post and the Commandant of the Air Corps Tactical School which was then located there. After two years in this post, he entered the Tactical School as student, graduating in 1927. His next school tour was at the Command and General Staff School at Fort Leavenworth, Kans., from which he graduated in 1928, and he was retained as a member of the faculty there for four years.

In January, 1930, he received his promotion to Lieutenant-Colonel, and two years later, December, 1931, his appointment as Assistant Chief of the Air Corps with the rank of Brigadier-General, to succeed Major-General B.D. Foullois, who had vacated that position to assume his duties as Chief of the Air Corps.

General Westover possesses all four aeronautical ratings bestowed by the Air Corps, and has had as well rounded service as any officer in the Corps. In 1933, he commanded the Air Corps maneuvers at March Field, Calif., during which practically all of the modern conceptions of the employment of air forces were tried out. His summary of the lessons learned during this maneuver furnished a valuable contribution to the advancement of the tactics and supply procedure of the Air Corps. He also participated in the Command Post Exercises held in New Jersey, in 1934, in the capacity of Commanding General, GHQ Air Force.

---oOo---

On Air Corps map No. 2, Washington, D.C. to Uniontown, Pa., dated March, 1934, it is noted that the compass courses between Uniontown and Pittsburgh are reversed. The supply of maps carried by every Air Corps activity with this error should be corrected. It is also noted that the Army field on this map is shown as "Rogers Field." Air Corps activities have been moved from this field to the Pittsburgh Allegheny Airport, located approximately four miles south of Pittsburgh.

NEWLY COMMISSIONED OFFICERS FOR THE AIR CORPS

The Secretary of War has approved the report of the Board convened to select the successful candidates for appointment as Second Lieutenant, Air Corps, Regular Army.

The final examination was conducted in the United States and foreign possessions, April 2-8, 1935, and approximately 475 candidates underwent examination. All candidates were graduates of the Air Corps Training Center, qualified airplane pilots and members of the Air Corps section of the Officers' Reserve Corps.

Of the 42 candidates selected, 40 are enlisted men of the Air Corps, Regular Army. The names of the successful candidates have been submitted to the U.S. Senate, and, upon confirmation, appointments will be tendered to those candidates, who are listed below in their order of standing, as follows:

<u>Name</u>	<u>Rank</u>	<u>Present Station</u>	<u>Home Address</u>
Clifton, Ray Willard	Staff Sergeant	Maxwell Field, Ala.	Gering, Nebraska
Wood, Randolph L.	Sergeant	Langley Field, Va.	Parksley, Va.
Johnson, Arnold Theodore	Corporal	Scott Field, Ill.	Wilmot, S. D.
Pitman, John David	Corporal	Barksdale Field, La.	Huntsville, Ala.
Stalder, Marvin Frederick	Private, 1st Cl.	Rockwell Field, Calif.	Riverside, Calif.
Parrish, Noel Francis	Private, 1st Cl.	Patterson Field, Ohio	Kingsville, Texas
Muehleisen, Dolf Edward	Private	Rockwell Field, Calif.	San Diego, Calif.
Swyter, Carl	Private	Fort Lewis, Wash.	Fort Lewis, Wash.
Weller, Richard Cole	Private	Mitchel Field, N.Y.	Hudson Heights, N.J.
Gavin, Edward Morris	Private	Maxwell Field, Ala.	Fort Gaines, Ga.
Jarmon, Robert Edward	Private	Crissy Field, Calif.	Los Angeles, Calif.
Crutcher, Harry, Jr.	Private	Randolph Field, Texas	Dallas, Texas
Malone, Jack Mason	Private	Brooks Field, Texas	Durant, Okla.
Moyers, Frank Neff	Private	March Field, Calif.	Highgrove, Calif.
Allee, Edward Schwartz	Private	Langley Field, Va.	Boston, Mass.
Renshaw, Harry Noon	Private	Barksdale Field, La.	Galveston, Texas
Stanley, Joseph Bynum	Private	Mitchel Field, N.Y.	Washington, D.C.
Langben, Thomas Frederick	Private	Barksdale Field, La.	Galveston, Texas
Sartain, Clarence Morice	Private	Brooks Field, Texas	San Antonio, Texas
Price, James Hughes	Private	Maxwell Field, Ala.	Floralda, Ala.
Moore, Joseph Caruthers	Private	Kelly Field, Texas	Scooba, Miss.
Fulwider, Lawrence Scott	Private	Scott Field, Ill.	Bloomington, Ind.
Harris, Lester Stanford	Private	March Field, Calif.	Riverside, Calif.
Holtermann, Eyvind	Private	Crissy Field, Calif.	San Francisco, Calif.
Wackwitz, Donald Newman	Private	Brooks Field, Texas	Springfield, Mass.
Houston, James H.C.	Private	Langley Field, Va.	Baltimore, Md.
Leitner, Chas. Henry, Jr.	Private	Maxwell Field, Ala.	Ware Shoals, S.C.
Wood, Clair Lawrence	Private	Crissy Field, Calif.	Liberal, Kansas
Harvin, Charles Bennett	Private	Bolling Field, D.C.	Baltimore, Md.
Macintyre, George Henry	Private	Crissy Field, Calif.	Los Angeles, Calif.
Arnold, Bob	Private	Barksdale Field, La.	Denver, Colo.
Armstrong, Burton W., Jr.	Private	Bolling Field, D.C.	Washington, D.C.
Stephenson, Mell M., Jr.	Private	Rockwell Field, Calif.	Athens, Ga.
Neely, Harold Lee	Private	Langley Field, Va.	Huntingdon, Tenn.
Nichols, Erickson S.	Private	Mitchel Field, N.Y.	Rye, N.Y.
Bell, Jasper Newton	Private	Crissy Field, Calif.	Santa Barbara, Calif.
Waldron, Russell Lee	Private	Maxwell Field, Ala.	Montgomery, Ala.
Day, William Foster, Jr.	Private	Mitchel Field, N.Y.	Greenwich, Conn.
Fisher, Robert Strachan	Private	Brooks Field, Texas	San Antonio, Texas
Coursey, Harry	Private	Mitchel Field, N.Y.	Middletown, Pa.
Hooks, Daniel Edwin	2d Lt. A.C. Res.	Not on active duty	Iowa Park, Texas
Todd, Raymond Patten	1st Lt. A.C. Res.	Not on active duty	Cambridge, Mass.

---oOo---

Major James H. Doolittle, aeronautical engineer and speed pilot, who is now a representative of the Shell Oil Co., recently dropped in on Hamilton Field, Calif., flying a Spartan monoplane. In a 15-minute talk to the assembled pilots of the field, he outlined the present day advancement in motor fuels and oils. An hour later, he took off for Sacramento.

Major Lewis R.P. Reese, Hamilton Field, Calif., conducted bombing practice recently from 15,000 feet on a 100-foot circle in San Pablo Bay. Piloting the B-12A Martin Bomber, 1st Lt. Birrell Walsh climbed directly into the sun, so that spectators shielded their eyes to glimpse the tiny speck in the sky. Bombing is now being done almost daily over the Bay at heights of 5,000, 8,000 and 15,000 feet. Extreme accuracy in direct hits is reported at all these heights.

DEATH OF MAJOR ZABLAN

Major Porfirio E. Zablan, Philippine Constabulary, who was a student in the Observation Section at the Advanced Flying School, Kelly Field, Texas, died at about 11:00 a.m., June 18th, as the result of injuries received in an airplane accident which occurred approximately three miles north of Kendalia, Texas, at about 11:30 on the night of the 17th. Taking off from Kelly Field at 8:00 p.m., on a reconnaissance mission, which included the towns of Sabinal, Pearsall, Pleasanton and Stockdale, Major Zablan checked in at Sabinal, from which point he was to proceed to Stockdale, which is just south of Randolph Field. At the time of his take-off, the weather was good, but later, at about ten o'clock, a light layer of clouds appeared for an hour or two. The clouds were not very thick, but did reduce the altitude at which he could fly. No word was received from him during the night, and preparations were made for a searching party to depart early the following morning. In the meantime, the radio broadcasting stations in San Antonio were requested to ask their listeners to furnish any information they could concerning the lost airplane.

After only a few of the searching party had taken off on Wednesday morning, a telephone call was received through Boerne to the effect that Major Zablan and the airplane had been located about three miles north of Kendalia and a few miles west of Twin Sisters. These towns are about 50 miles due north of Kelly Field. Due to the rugged nature of the country and the flooded condition of streams and fields, it was impossible to ferry him out by air or to land a doctor in the near vicinity. A ground ambulance was immediately dispatched to the scene of the accident, arriving there at about 11:00 a.m. Major Zablan died as the ambulance arrived. Investigation revealed that the wreck was located by Mr. John Kneupper, of Blanco, Texas, who with his brother was searching for some sheep which they thought were marooned on high ground.

Major Zablan was in the airplane, but unconscious when found. One brother remained at the scene while the other hurried to the nearest doctor, who arrived in less than an hour. Everything possible was done to save the Major's life and make him comfortable until the ambulance could arrive, but it was thought from the first examination that he could not regain consciousness. It is believed he was unconscious from the time of the accident until his death.

The exact cause of the accident is undetermined, but it appears he was flying on a course of approximately 340 degrees over a valley and that he did not see one of the numerous low hills which exist in that country, and must have flown into the side of one of these hills while cruising. The airplane struck about 50 feet from the top of the hill and skidded along for some 30 yards before

coming to a stop rightside up. The landing gear and wings were knocked off, and the engine pushed back into the fuselage, but the airplane did not catch fire. Both flares were still in place; his safety belt was buckled, and the switches were on.

Major Zablan would have graduated on June 22d, 1935. He is survived by his wife, Mrs. Mary S. Zablan, two daughters and one son, all of whom live in Manila, P.I. He had long been a member of the Philippine Constabulary and was one of the senior Majors of that organization. Our deepest sympathy is extended to his family and to the Filipino people who have lost a most valuable officer.

---oOo---

WAR DEPARTMENT ORDERS

CHANGES OF STATION: To Hamilton Field, Calif.: Major Clinton W. Russell, from duty as a member of the War Department General Staff.

To Cambridge, Mass., for duty as students at Harvard School of Business Administration: 1st Lieut. Edward H. White, Procurement Planning Representative, Chicago, Ill., and Captain Raymond R. Brown, student, A.C. Tactical School, Maxwell Field, Ala.

To Chanute Field, Ill.: Captain Alfred L. Jewett from the Philippines.

To Randolph Field, Texas: Major Martinus Stenseth, from 2d Obs. Sqdn., Nichols Field, P.I. Relieved from temporary rank upon departure.

To Hawaiian Department: 1st Lieut. James E. Briggs, from duty as student, A.C. Technical School, Chanute Field. - Captain Dache M. Reeves from Wright Field, Ohio.

To Philippine Department: 1st Lieut. Sam W. Cheyney, 2nd Lieut. George F. McGuire from duty as students, A.C. Technical School, Chanute Field.

To Panama Canal Department: 1st Lieut. John A. Samford from A.C. Tech. School, Chanute Field.

To Fort Logan, Colo.: 1st Lieut. Paul W. Wolf from March Field, Calif.

To Hot Springs, Ark.: Major James A. Healy, Kelly Field, for observation and treatment at Army and Navy General Hospital.

To Mitchel Field, N.Y.: Major Louie C. Mallory from duty with 81st Service Sqdn., Kelly Field. Relieved from temporary rank Aug. 10, 1935.

To Presidio of San Francisco, Calif.: Major John G. Colgan, from Philippines, to duty at Hqrs. 9th Corps Area.

DETAILED TO AIR CORPS: 2nd Lieut. Edward G. Winston, Inf., and to Randolph Field, July 1, 1935, for flying training.

TRANSFERS: 2nd Lieut. Victor H. King, Advanced Flying School, Kelly Field, to 62nd Coast Artillery, Fort Totten, N.Y., June 19, 1935.

RELIEVED FROM DETAIL TO AIR CORPS: 2nd Lieut. William R. Huber, to 1st Cavalry Division, Fort Bliss, Texas, for duty with Field Artillery.

Technical Sergeant Thornton C. Fitzsimon, 20th Bombardment Squadron, Langley Field, Va., appointed Warrant Officer, Regular Army, rank from June 1, 1935; remains on duty at Langley Field.



NEWS LETTER

ISSUED BY THE OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON, D.C.

VOL. XVIII

NO. 13

JULY 15, 1935.

Information Division
Air Corps

July 15, 1935

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

DEVELOPMENT AND PROCUREMENT OF MILITARY AIRCRAFT

It is a universal experience that individuals engaged in different specialized phases of any one activity often have difficulty in understanding each other's problems. This usually takes the form of a claim of lack of cooperation when more often it is a lack of mutual understanding. In the Air Corps this difficulty appears in providing suitable aircraft for the users of the airplanes. A worth while characteristic noted as a new technical development may be desired by the service and requested by it. Procurement and engineering organizations then seem to overlook it until it just happens to appear, as what may seem to be an obsolete feature, some years later. This may all be quite routine and the time loss entirely legitimate. On the other hand, those in closer touch with technical developments may foresee definite changes in requirements but, due to a lack of general understanding, be unable to sell the idea to the Service. Air Corps development history has been full of such antagonistic incidents.

In an effort to throw a little light on the dark subject of those years between the first expression of an idea and its delivery to the Service as standard equipment, the following descriptive outlines are offered:

The first one which follows immediately covers the subject from the fundamental considerations as far as the "Type Specification" and its publication. This will be followed by subsequent articles explaining, briefly, first, the extent of the experimental stage and, second, the details of the evaluation, contracting and construction of airplanes for service procurement.

The procurement of military airplanes like airplanes themselves must be a compromise of several features. There are two exactly opposite fundamental considerations which must first be reconciled. The first is the reduction to concrete material of an expression of the Service need. The second is the development of an item to a usable form and then building the tactics around the resultant equipment.

If the sources of information are of a high order of reliability and extremely foresighted, the first arrangement is probably the best. The difficulty, however, lies in visualizing the appear-

ance of an article to be built to meet these expressed requirements. In the reduction to practice of an idea, all the loosely phrased and occasional haphazard requirements are built in just as surely as the soundest and most concisely stated considerations. For this reason, our military airplanes are often handicapped in weight, size, and performance by having included features which originally were expressed as merely desirable adjuncts to the fundamental creation.

Therefore, it is occasionally advantageous to start out on a development program on a pure type, not handicapped in this manner, so that some concrete example of the "thoroughbred" is available as a model from which to start. It is just as sound to work on this basis, meeting only one fundamental functional requirement and then modify the airplane, as it is to take an expression of a lot of needs, build to meet these, and then refine the product to approach the ideal form. The criterion for determining the procedure to be followed should be, first, the degree of perfection of the existing tactics versus the rate of development of technical progress and, second, the ability of those expressing these requirements to rationalize the situation and arrange a correct order of importance of the several features versus the ability of those charged with developing a type to work along a logical path leading to a definite practicability.

It is, indeed, a delicate problem, and may be summed up in some such fashion as this. Many a technical article actually produced in metal, wood, or fabric bears little resemblance to the article intended by the originator of the idea, and likewise many a technical development of tremendous academic interest has no immediate practical application.

Another compromise which must be made is that between training requirements and expected tactical requirements. It is certain that immediately following the first stages of any military conflict, a number of new and definite requirements will be established, and then the corresponding technical developments will have to take place. There are several ways of handling this situation. The first is to concentrate upon the training requirements of peace-time development and include as many of the anticipated service features as possible. The second is to concentrate on estimated service re-

quirements and include as many peace-time training features as possible. The third is to build solely to training requirements, keeping a small scale development program of pure service types under way. Whatever the course followed, it is certain that the inclusion of any extraneous feature not required for the performance of the established mission is a distinct handicap. The factors determining which plan to follow are many and include (1) the possibility of an emergency occurring in the near future; (2) the time necessary to establish emergency production; (3) its rate after establishment; (4) the state of training of the Air Force; and (5) the accuracy with which emergency conditions can be estimated.

Still another compromise exists in balancing the use of tried equipment of inferior performance against the use of development equipment of promise but of uncertain dependability. Faster development of equipment is always obtained when this equipment is in actual service, but it handicaps the operating personnel to a marked degree in a fixed training schedule. The decision as to policy again depends on whether the service can assist in the development or whether the necessities of training and preparedness for expected emergencies require some sacrifice of aircraft performance in order to secure service dependability.

There is one more fundamental characteristic in the development of aircraft that affects all the other factors and must always be considered. This is the element of time. An idea expressed today will be a service item in from three to five years elapsed time. In the meantime, there is a maze of development and procurement detail to be gone through. By far the greatest time requirement is for the stage from initial expression to the service test article. Previous experiences have indicated that the production of existing types can reach astounding figures in a relatively short time, but there is no short cut in the experimental and development stages.

The Air Corps system as it now exists is essentially one of compromise, leaning at all times to the practical side and taking its cues from the service, but restricted by budget limitations.

There is at all times a "design study" development going on which is intended to anticipate requirements by several years. Little restraint is shown here other than to base the requirements on the last existing expressions from the service. However, all technical developments, regardless of their service record, may be considered as fair means to achieve the ultimate at this stage.

These studies indicate the fields of investigation which apparently are not worth further development, as well as establishing the approximate form or, in

some cases, almost the exact form of future procurement. The "Directives" or "Approved Type Characteristics," which form the immediate basis for specifications, are the expressions of the service through the agencies of "Boards," as approved by the Secretary of War and correlative to the assigned missions of the Air Corps in the scheme of National Defense. These "Boards" have been in the past generally convened for the purpose of studying existing experimental aircraft. They then make recommendations for future development. At this time the relative importance of the numerous characteristics are determined and the item of equipment chosen. This is usually a matter of altering the requirements of existing specifications. All too often there is a mere adding of items and requirements and not modification. One of the greatest difficulties existing at present is that the recommendations of any one board or group cannot be produced in a serviceable airplane for at least two more years and therefore appears obsolete to the Board called to flight test it. For this reason it appears that it would be preferable to have a nearly permanent type board, which could accustom itself to this long-range planning and, in addition, keep its recommendations modernized or even slightly futuristic. In some instances where an old Directive has been outdistanced by the performance of modern airplanes a new set of increased performance figures are submitted to be approved as "Approved Type Characteristics."

These "Directives" or "Characteristics" include all the specific items of performance and equipment and then, using the last previous specification, a new "Type Specification" is written, based upon these "minimum" requirements.

This Type Specification is a reduction to technical terms of the recommendations made by the service through its representatives. This Specification tells "what" but not "how." The manufacturer must make up his own description (Detail Specification) telling in detail how he proposes to accomplish the desired results. The drafting of these Type Specifications is a tedious engineering job, requiring the close coordination of all the separate units charged with the component parts of an airplane. There is in addition a "Handbook of Instructions for Airplane Designers," which is kept up to date and serves not only as a guide but includes definite demands and criteria in the way of principles of construction, strength, safety features, and installations which have been shown to be satisfactory in service. In this way a multitude of features which would turn out to be unsatisfactory in service are eliminated before the airplane ever reaches the drawing-board stage.

The Type Specification lists the engine that may be used; it lists the equipment

required; and in general gives quite detailed statements of the portions for which the Air Corps itself is responsible.

Under existing procurement procedure there cannot be any submission of data for preliminary approval or comment. It all has to be submitted for "information only." Since the details cannot be passed upon for agreement with Air Corps standards of practice, the Type Specification itself must become more binding.

This Specification as written must then be approved by the Secretary of War and is then ready for promulgation by the procurement organization. The minimum of time which will have elapsed will be from two to six months.

These Specifications are then attached to a proposal and the Industry is invited to submit bids on airplanes purporting to meet them.

These bids will be received from two months to a year later, depending on

whether the Type Specification covers a production model already well developed, or an experimental type, or simply a "design."

Since at the present time each procurement must be a separate competition, there can be no assurance that a definite line of development has taken place or that a definite line of improvement will ever take place.

This completes the first stage of any procurement program going from the source of the requirements (the expressions of the service), through the reduction of these expressions to a concrete form for procurement (the Type Specification), to the reduction of these expressions to practice in the form of complete aircraft, designs, and specifications, submitted in a competition in response to the pertinent Circular Proposals. The time elapsed will have been from six months to a year and a half for this phase.

---oOo---

HONORARY DEGREES AWARDED TO SECRETARY OF WAR AND CAPTAIN STEVENS

During the Commencement Exercises of the 1935 graduating class of the South Dakota State School of Mines, Rapid City, S.D., the Hon. George Henry Dern, Secretary of War, and Captain Albert W. Stevens, Air Corps, were among several other men prominent in the field of science, awarded honorary degrees.

The honorary degree of Doctor of Engineering was conferred upon the Secretary of War for his high achievements in the profession of mining engineering, his inventions in the field of ore treatment, and his record of eminent statesmanship as State Senator, Governor of Utah and Secretary of War.

Captain Stevens received the honorary degree of Doctor of Science in recognition of his ability as a leader and as a scientific observer of the greatest of stratosphere flights. The regents of Education of South Dakota, in awarding this degree to Capt. Stevens, stated:

"Possibly an admiring public thinks of Captain Stevens principally as a courageous explorer of the upper air, but he has received wide recognition and many honors for his outstanding accomplishments in engineering and science as well. Particularly in the field of aerial photography, both in war and in peace, has he made important contributions. His photographic surveys of large areas of South America, the first photograph ever made of the moon's shadow upon the earth during a total eclipse of the sun, and his long distance photographs made by the infrared method are some of his well known achievements."

Dr. Lyman James Briggs, Director of the National Bureau of Standards, who

received the honorary degree of Doctor of Engineering, delivered the commencement address, during the course of which, touching upon the forthcoming Stratosphere Flight, he praised the National Geographic Society for making the flight possible by financing the expedition and attending in an executive capacity to endless vitally important details, and the Army Air Corps for making it possible through detailing flight personnel of unsurpassed experience and ability, together with airplanes and special equipment for the use of the expedition.

---oOo---

APPROPRIATION EXPECTED FOR KELLY FIELD

The Associated Press recently carried a dispatch to the effect that \$524,350. was to be allotted to Kelly Field from the Work Relief Funds. According to the dispatch, this fund was to be expended as follows:

\$ 68,250.00 for Gas and Oil storage and distribution.
52,400.00 for a miniature range.
170,000.00 for paved aprons and runways.
180,000.00 for improvements to landing field and building area.
3,000.00 for machine gun butts.
50,700.00 for general repairs to buildings and utilities.

Official confirmation of these allotments has not been received at this writing.

---oOo---

The Air Corps, as of May 31, 1935, had 116 enlisted men holding flying ratings - 109 pilots and 7 observers. Since then, 39 of these pilots were commissioned second lieutenants in the Air Corps.

V-6822, A.C.

BILL INTRODUCED CREATING A DEPARTMENT OF AIR SERVICE

Hon. Ernest Lundeen, Member of Congress from Minnesota, introduced in the House of Representatives on June 29th, a Bill, H.R. 8729, to the following effect:

"That there is hereby created an executive department in the Government, to be called the 'Department of Air Service', and a Secretary of Air Service who shall be the head thereof and who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall receive a salary of \$15,000 per annum and whose tenure of office shall be like that of the heads of the other executive departments; and section 158 of the Revised Statutes is hereby amended to include such Department, and the provisions of Title 4 of the Revised Statutes, including all amendments thereto, are hereby made applicable to said Department. The purpose of the Department of Air Service shall be to promote, develop, and regulate the navigation of the air for the benefit of the people and the Government of the United States. The said Secretary shall cause a seal of office to be made for the said Department, of such device as the President shall approve, and judicial notice shall be taken of the said seal.

Sec. 2. That there shall be in said Department an Assistant Secretary of Air Service, to be appointed by the President, who shall receive a salary of \$12,000 per year. He shall perform such duties as shall be prescribed by the Secretary or required by law. There shall also be one Chief Clerk and a disbursing clerk, and such other clerical assistants, inventors, inspectors, experts, scientists, and special agents as may from time to time be provided for by Congress.

Sec. 3. That the following offices, bureaus, divisions, and branches of the Government are hereby transferred to the Department of the Air Service and the same shall hereafter remain under the jurisdiction and supervision of such Department:

- (a) The Air Corps of the Army;
- (b) The Naval Flying Corps in the Department of the Navy;
- (c) The Bureau of Aeronautics in the Department of the Navy;
- (d) The Bureau of Air Commerce in the Department of Commerce;
- (e) The military air stations;
- (f) The naval air stations; and
- (g) All agencies of the Government connected with or supervising the production or procurement of aircraft or aircraft supplies for the United States or any agency thereof.

Sec. 4. That the official records and papers now on file in and pertaining exclusively to the business of any bureau, office, department, or branch

of the public service in this Act transferred to the Department of Air Service, together with the furniture and apparatus now in use in such bureau, office, department, or branch of the public service shall be, and hereby are, transferred to the Department of Air Service.

Sec. 5. That the Secretary of Air shall have charge in the buildings or premises occupied by or appropriated to the Department of Air Service, of the library, furniture, fixtures, records, and other property pertaining to it or hereafter required for use in its business. He shall be allowed to expend for the purchase of buildings, materials, machinery, vehicles, vessels, and apparatus required for the operations of the air service in promoting, developing, and regulating the navigation of the air, and for periodicals and for the purposes of the library and for rental of appropriate quarters for the accommodation of the Department of Air Service within the District of Columbia, and for all other incidental expenses, such sums as Congress may provide from time to time: Provided, however, That where any office, bureau, or branch of the public service transferred to the Department of Air Service by this Act is occupying rented buildings or premises it may still continue to do so until other suitable quarters are provided for its use: Provided further, That all officers, clerks, and employees now employed in any of the bureaus, offices, departments, or branches of the public service in this Act transferred to the Department of Air Service are each and all hereby transferred to said department at their present grades and salaries, except where otherwise provided in this Act: And provided further, That all laws prescribing the work and defining the duties of the several bureaus, offices, departments, or branches of the public service by this Act transferred to and made a part of the Department of Air Service shall, so far as the same are not in conflict with the provisions of this Act, remain in full force and effect, to be executed under the direction of the Secretary of Air Service.

Sec. 6. That all duties performed and all power and authority now possessed or exercised by the head of any executive department in and over any bureau, office, officer, board, branch, or division of the public service by this Act transferred to the Department of Air Service, or any business arising therefrom or pertaining thereto, or in relation to the duties performed by and authority conferred by law upon such bureau, officer, office, board, branch, or division of the public service, whether of an appellate or revisory character or otherwise, shall hereafter be vested in and exercised by the head of the said Department of Air Service.

Sec. 7. That the Secretary of Air Service shall annually, at the close of each fiscal year, make a report in writing to

Congress, giving an account of all moneys received and disbursed by him and his Department and describing the work done by the Department. He shall also, from time to time, make such special investigations and reports as he may be required to do by the President, or by Congress, or which he himself may deem necessary.

Sec. 8. That the Secretary of Air Service shall investigate and report to Congress a plan of coordination of the activities, duties, and powers of the office of the Secretary of Air Service

with the activities, duties and powers of the present bureaus, commissions, and departments, so far as they relate to the air service and the navigation of the air, in order to harmonize and unify such activities, duties, and powers with a view to further legislation, to further define the duties and powers of such Department of Air Service.

Sec. 9. That this Act shall take effect from and after the date of its passage, and all Acts or parts of Acts inconsistent with this Act are hereby repealed.

---000---

WASHINGTON NATIONAL GUARD AIRMEN RETURN FROM ENCAMPMENT

By the News Letter Correspondent

Machine guns cracked five miles out over the Pacific Ocean; airplane motors droned over Camp Murray on day and night patrols; the Fort Lewis airdrome belched up dirt from ground gunnery practice, and the photographic and radio stations bustled with activity for a two weeks period as the 41st Division Aviation, Washington National Guard, participated with troops from Washington, Oregon, Idaho and Montana in the annual Division encampment at Camp Murray and Fort Lewis, Washington, from June 11th to 25th.

It was the first National Guard division encampment to be held in the Northwest since the World War and, under the command of General White, Adjutant General of Oregon, the 7600 Guardsmen moved into camp with precision. Except for one Infantry regiment, practically all of the troops moved by motor caravan, using trucks issued just before the camp.

Enlisted personnel of the Division Aviation moved to Camp with the 161st National Guard Infantry regiment from Spokane, Wash., via the Northern Pacific Railroad. Six pilots with enlisted passengers flew the Douglas Observation planes to camp, arriving over Fort Lewis just as the Air Corps troops were detraining.

Arriving in camp, the Division Aviation learned that it was to have Col. Roy Kirtland, Air Officer, 9th Corps Area, Presidio of San Francisco, Calif., as Division Air Officer; and Captains Joe Bayley, Instructor of the California National Guard, and Guy B. McNeal, of Crissy Field, Calif., as inspectors during the encampment.

Captain Bayley flew a Douglas Observation plane to Fort Lewis for use by the 41st Division Aviation, making a total of seven airplanes for the encampment.

Reaching the Fort Lewis airdrome at 10:00 a.m., June 11th, Captain Claude Owen, Operations Officer, started his first tow target gunnery missions at 1:00 p.m.

Because of the populated areas in Western Washington, it was necessary to conduct the gunnery missions five miles

out over the Pacific Ocean, which was an hour's flight from Fort Lewis, and necessitated the use of life preservers by all persons on these missions.

Despite adverse weather conditions, rain, fog and low hanging clouds, all phases of the tow target gunnery were fired by both front and rear gunners.

With gunnery missions both in the forenoon and afternoon on the regular schedule, the remaining five airplanes were used in cooperative missions with other arms of the service. Artillery fire was adjusted by radio for the 146th and 148th Field Artillery, as well as the Coast Artillery at Forts Casey and Worden.

Having just received four of the new SCR AA 185 radio sets for airplanes and the SCR AA 186 ground set before going to camp, much attention was paid to radio communication, both code and voice. The old SCR 134 sets were used in two airplanes, making radio communication possible in six of the seven airplanes. A requirement laid down by Major Robin A. Day, Air Corps, Commander-Instructor, was that on every flight each airplane was to check in with the ground station as soon as possible after the take-off.

The new radio sets proved a revelation to the officers who, although requiring some time thoroughly to acquaint themselves with their operation, found such operation easy and very effective before the camp was over.

Flying started every morning at 7:30 a.m., and continued until 9:00 a.m. Under the program of operations, it was not necessary to hold any airplanes on the ground during the day for their 20 and 40-hour checks, these checks being made at night.

Intense interest in the camp came with the execution of the 81st Brigade problem, which took ground troops into the field for a night advance. Three airplanes were requested for Red and Blue patrol by General Carlos Pennington, Brigade Commander. The patrols started at 4:00 p.m., and continued throughout the night until 8:00 a.m. the following morning. It was during these problems that both the air and ground forces learned considerable about the tactics of the other.

Red airplanes were assigned the duty of V-6822, A.C.

observing the advance during the night. As the doughboys advanced through the woods into semi-open country, parachute flares were dropped with considerable effectiveness on the ground forces, who were not visible to the airplanes.

The Red ground forces were represented by various panels, and small details of men, who constantly moved the panels. Each movement was sent by code communication to the Blue Army. At dawn, although it was raining, the Blue Army called for photographs showing the position of the Red Army.

It was both pleasing and surprising to the Photographic Section, commanded by Lieut. H. R. Wallace, that pictures taken under such adverse conditions at 4:30 a.m., showed the enemy panels so clearly. The pictures were taken on a 30th and 50th of a second. Both obliques and verticals were taken.

Great secrecy surrounded the Division problem, which started with the issuance of orders that no one leave camp for 48 hours. All orders for the problem were issued over the radio net. In this problem the Red airplane carried long Red streamers, and was given the particular duty of photographing every movement of the Blue Army, in order to impress upon the ground troops the extreme care that must be used in maneuvering on the ground.

The two Blue airplanes were assigned the duty of observing the panel movements of the Red ground force, and reporting these movements by radio, drop and pickup messages and overlays. On these problems Captain McNeal acted as Division Air Officer, Captain Bayley as Red Air Officer and Colonel Kirtland as Division Air Force Umpire. Major Day was left to command his air force, which kept an up-to-date situation map of both problems.

Despite the fact that the Fort Lewis airdrome is not lighted, night flying operations were conducted off this field during the problems. Ground crews were kept on the alert to see that highway "pots" were burning all night. These pots were used to outline the airdrome, which is being considerably enlarged under the direction of Lieut. Davis, commander of the Fort Lewis Regular Army corps detachment.

Every cooperation was given the National Guard flyers by the Fort Lewis detachment, which was at Ilwaco, Wash., conducting their gunnery when the camp started. The photographic shack was thrown open to the Guardsmen, as was the Fort Lewis hangar and gassing facilities.

During the only two photographic days of camp, a mosaic was made of the Camp Murray-Fort Lewis reservations for the Division Commander. The War Department request for verticals and obliques of

all airports in Western Washington was complied with, and the Photographic Section photographers were busy fulfilling the requests of ground troops for various kinds of pictures.

The official field inspection was made by Colonel Kirtland, who expressed satisfaction with both men, officers and equipment. The troops were mustered by Captain McNeal, who was the camp inspector.

Governor Charles H. Martin, of Oregon, joined with Governor Clarence D. Martin, of Washington, in the official review of all troops at Fort Lewis, where 35,000 persons saw the largest review in years. General Paul B. Malone, Commanding General of the Ninth Corps Area, and General Rosenbaum, Commander of Fort Lewis, were on the reviewing line.

As the last foot troops passed the reviewing stand, two 3-ship formations came low over the parade ground as observers stood at salute to the reviewing officers.

The speed with which aerial photographs can be taken, developed and delivered back to their destination was demonstrated to the two Governors by the 116th Photographic Section. A picture was taken as the first troops passed the reviewing stand. In 20 minutes it was delivered by airplane at the feet of the two State Executives bearing the same name. An hour and 50 minutes constituted the time required for the parade to pass in review.

"You've had a most splendid camp, and I want to congratulate you on your organization," Colonel Kirtland stated to Major Day when bidding him good bye. In this remark both Captains Bayley and McNeal concurred.

---oOo---

PURSUIT PLANES TESTED AT HIGH ALTITUDES

Major C.V. Haynes, Air Corps, recently conducted tests flights at Langley Field, Va., on P-6D and P-12K airplanes. In testing the turbine supercharger, the P-6D reached an altitude of 34,000 feet with the propeller set at 21.5° pitch. At that altitude the gas consumption was between 40 and 50 gallons per hour and, incidentally, the weather temperature was 50° below zero. The best rate of climb was between 15,000 and 20,000 feet. The peak in air speed was found to be at 22,000 feet, with a maximum of 218 miles per hour.

The P-12K, equipped with a ten to one blower, reached 26,500 feet. In combat against the P-6D, it demonstrated superiority in maneuverability up to 15,000 feet. Above this altitude, the P-6D was superior. In combat with the P-12E, P-6E and P-26, the P-12K proved itself to be superior at any altitude.

In acrobatic flying, the P-12K is almost perfect. The motor will not cut out in V-6822, A.C.

any position, and the elimination of a carburetor enables the motor to clean itself of small quantities of water in the gasoline. Although its full throttle air speed is a little more than that of the P-12E, the increased rate of acceleration is astonishing.

One chief difficulty encountered with the P-12K has been the inability to keep the air and gasoline controls properly adjusted. And the discharge nozzle screens have given some trouble by fouling easily. But it's a real motor, judging from the one that has just topped 288 hours without overhaul.

---oOo---

CONTRACT AWARDED FOR TRAINING PLANES

Hon. Harry H. Woodring, Assistant Secretary of War, recently announced the award for 26 Primary Training airplanes to the Stearman Aircraft Company of Wichita, Kansas, in the total amount of \$243,578.

The circular proposal for this type of airplane was issued to the industry on August 20, 1934, with the opening date of April 22, 1935.

In accordance with normal procedure, the airplane on which the bid was received was evaluated by means of actual flight tests conducted by a Board of Officers and, in view of the fact that it represented a marked advance in Primary Training type development, the contract was awarded for these airplanes. The total amount also includes a limited number of spare parts.

---oOo---

GUNNERY PRACTICE FOR 33RD PURSUIT SQDN.

The 33rd Pursuit Squadron, stationed at Langley Field, Va., completed a week of gunnery practice at Virginia Beach, Va., on June 22nd, with most satisfactory results. The entire squadron flew to Virginia Beach on the morning of June 17th and set up camp at the National Guard Airport.

Most of the first day was spent in arranging and organizing the camp. On the following day, however, the routine began in earnest. The ships were in the air and on their various missions incident to the gunnery practice by 4:30 in the morning. Most of the flying was completed by ten o'clock, and the servicing of the ships completed by eleven, after which the men were permitted to indulge in the various forms of recreation offered at Virginia Beach proper.

The squadron was rationed with a detachment of the 58th Service Squadron, and it is doubted if any member of the organization had any complaint to make concerning the food served.

On June 21st, the squadron proceeded to Rocky Mount, N.C., for the dedication of the municipal airport at that city, returning the following morning

to Virginia Beach. A number of the enlisted men of the squadron returned to Langley Field on Saturday, June 23rd, the remainder returning Monday morning.

The News Letter Correspondent believes that the gunnery practice was a success, as shown by the scores made by the officers and cadets, and, further, that with all the conveniences and amusements to be found at Virginia Beach, everyone must have had a pleasant time.

---oOo---

IMPROVEMENTS AT POPE FIELD, FT. BRAGG.

Within the last nine months, many improvements have been made at Pope Field, Fort Bragg, N.C., under the direction of the new commanding officer, Captain E.P. Gaines, Air Corps. A few of the more important improvements are as follows:

An 800-foot drainage system which has four circular brick-lined manholes; partitions with burned lined finish in the operations office which divide it into an operations office, an engineering office and a waiting room for pilots; the planting of 81 pecan trees bordering the street adjacent to the barracks and officers' quarters; planting of 50 peach trees and a 5-acre garden for the organization mess; the clearing and leveling of an extension to the airship field which increases its size to 2,000 x 1,000 feet and makes it large enough to permit heavily loaded airships to take off by dynamic lift.

It is rumored that a 24-hour teletype weather station will soon be in service at the field, completing the New York - Miami chain. The Department of Commerce will install the teletype system, and the Balloon Squadron and Flight "C" men will maintain the station.

---oOo---

AIR SICKNESS ATTACKS WEST POINTERS

Persons traveling in airplanes under bumpy air conditions are just as susceptible to air sickness as ocean voyagers are subject to sea sickness when the going is rough. According to the Langley Field Correspondent, bumpy air conditions around Mitchel Field, N.Y., have caused much distress to a large percentage of the first classmen of the United States Military Academy who are now at that field receiving familiarization flights in airplanes of the Second Bombardment Group, Commanded by Lieut.-Colonel Charles B. Oldfield. It is to this epidemic of air sickness that the News Letter Correspondent attributes the increase in the number of man hours devoted to airplane maintenance work.

---oOo---

Mr. Lee Smith recently piloted a new Vultee fast transport plane to Langley Field for inspection by General Andrews and his staff. Major Alec Seversky arrived in his new two-place Pursuit plane for a similar inspection.

FAST WORK IN CHANGING ENGINES

According to the News Letter Correspondent from Pope Field, Fort Bragg, N.C., Flight "C," 16th Observation Squadron, stationed at that post, has set a record on engine changing, and he then adds: "Anyway, it is believed to be a record for an organization of its strength of 28 men at the time of the occurrence."

The record breaking engine change was made while the Flight was on maneuvers at Fort Benning, Ga., with the 8th Infantry Brigade, May 6-18, 1935. In an elapsed time of 11 hours and 15 minutes, an engine was procured by truck from Maxwell Field, almost 100 miles away, the damaged engine removed, and the new one installed and ready to run."

A letter was received from Brigadier-General R. O. Van Horn, Commanding the 8th Brigade (Reinforced) commending six members of Flight "C" and two members of the Second Balloon Squadron for this achievement, viz: 2nd Lieuts. Dudley E. Whitten, John C. Covington, Master Sgt. Samuel E. Lunday, Staff Sgt. Frank Hall, Sergeant Jesse Webb, Privates Gordon T. Kight, Samuel P. Schaaf and Deams C. Pearce. The letter goes on to say:

"On the morning of May 8th, the engine in O-1G airplane No. 3 began to throw oil badly and gave other indications of being in a dangerous condition. Arrangements were made with Maxwell Field to supply a new engine and at 3:00 p.m. that day Lieut. Whitten and Sgt. Webb departed by truck. They were back at Fort Benning with the engine at 10:50 that night, and by 2:00 p.m. the next day this engine was installed and running. At about 2:30 p.m., the crew chief informed the Commanding Officer, Flight "C," that the crankcase of the newly installed engine was cracked. In the face of this disheartening turn of events, Lieut. Covington and Private Pearce departed for Maxwell Field by truck for another engine at 3:15 p.m. They were back at Fort Benning at 10:30 that night, and a crew of four, consisting of Sgt. Lunday, Sgt. Hall, Pvt. Schaaf and Pvt. Kight started at once to install the new engine. At 2:30 a.m., May 10th, this engine was completely installed and ready to run. The engine was run in that morning and at noon May 10th, airplane No. 3 was on the line ready to do its share of the tow-target work which commenced at that hour."

The services rendered by the above-mentioned constituted a signal contribution to the success of the maneuvers, and it affords me genuine pleasure to make record of their accomplishments."

---oOo---

The last P-12D airplane in the 36th Pursuit Squadron, Langley Field, Va., was ferried to March Field, Calif., by Lieut. B.S. Harrell, Air Corps, on June 4th.

NEW CLASS REPORTS AT ADVANCED SCHOOL

A total of 68 students, graduates from the Primary Flying School at Randolph Field, Texas, reported at the Advanced Flying School, Kelly Field, Texas, for the final four months of training, on July 1st. This class consists of 32 officers of the Regular Army, 33 Flying Cadets, and 3 foreign officers, namely, 1st Lieuts. Ismail Hickmet and Ismail Raif of the Turkish Army, and 1st Lieut. Fructuoso P. Saurez of the Mexican Army. This class is scheduled to graduate on October 15th, next. Below is given a summary of the flying and ground school training to be given this class:

<u>Flying</u>	<u>Hours</u>
Transition	15
Specialized	56
Instrument Flying	13
Cloud Flying	5
Night Flying (Local)	3
Day navigation	28
Night navigation	15
Total	135

<u>Ground School</u>	<u>Hours</u>
Attack Aviation	3
Bombardment Aviation	3
Bombardment Racks	3
Bombs and Explosives	4
Bomb Sights	6
Combat Orders	10
Cooperation with Artillery	24
Infantry Missions	10
Military Organization	4
Observation Aviation	8
Photo Interp and Photography	4
Pursuit Aviation	3
Code Practice (18 words per minute)	20
Reconnaissance	8
Signal Communications	12
Squadron Duties of Junior Officers	8
War Planning Principles	2
Trap Shooting	
Total	132

---oOo---

The 37th Squadron, Langley Field, Va., is fast acquiring information necessary to the performance of its mission as Attack. Three officers and three enlisted men (Captain Schramm, 1st Lieut. Grussendorf, and Lieut. Sutherland (ACR), Staff Sgt. Miller, Corporal Martini and Pvt. 1st Class Hankey) have just returned from a 10-day period of visiting the Third Attack Group at Barksdale Field, La., observing their tactics and acquiring some first hand information on the loading and laying of smoke as well as dropping some parachute bombs. The trip was made in three newly acquired A-8 type airplanes.

V-6822, A.C.

AIR FORCE CRUCIBLE REACTIONS

FOLLOWING out the purpose of an open forum discussion, the Air Corps News Letter article, entitled "The Air Force Crucible," in the issue of June 15, 1935, has caused a considerable amount of reaction within the Air Corps.

As one old field soldier phrased it, the attitude taken in the above referred to article was a typical case of "the ostrich hiding his head in the sand." It will be recalled that the author of "The Air Force Crucible" based his position upon the U.S. national policy as expressed in the National Defense Act and other supplementary legislation. These state that our national policy is one of defense. Carrying out that thought, the author presented the considerable advantages possessed by a land-based air force when combating any carrier-based air force which might be brought to attack the United States.

Comments of other students of the development of military aviation show that they believe that attack in the future will not be made by employing aircraft carriers to bring the military planes close to the shores of the country against which an attack is to be launched. They base their belief upon the history of the development, not only of military airplanes, but also of commercial airplanes, during the brief span of years during which airplanes have been the subject of intensive aeronautical engineering research. Recently, commercial engineers have been prolix in their claims that, insofar as commercial airplanes are concerned, the efficiency increases with the size. They are unable, at present, to see any limitation to this progression although, as with all other moving craft, such a limit will, no doubt, ultimately be reached.

In line with this trend of development, these students foresee for the military airplane of the future a great range, which will permit it to go from its base in the home country, across great distances, either over land or sea, and return to its home base for replenishment of ammunition, fuel and supplies. They state that, if this is to be the case, probably the best defense will be the possession of a force of similar airplanes which could be used to inflict adequate retaliation.

This school of thought bases its contention upon the analogy with the development of surface fleet operations. In the days of Drake and Nelson, surface fleets enabled the country possessing them to exercise domination over countries with seaboard cities, which were defended neither by fortifications nor an adequate navy. Such do-

mination was in most cases exerted by the mere threat of inflicting damage for which no retaliation could be made. There appears to be considerable merit in the argument that a similar influence would be exerted by a country possessing a strong air force over such countries within the limit of its range of action as did not have adequate means of making reprisals.

In further support of their theory, these proponents point to the vulnerability of aircraft carriers and their accompanying escort of fleet vessels as they approach within the radius of action of shore-based aircraft. The advantage in range of shore-based planes over the carrier-based aircraft will always necessitate the aircraft carrier coming within the effective range of the airplanes operating from the shore before it is able to launch its planes to attack objectives on the land.

As indicating the vulnerability of surface craft to aircraft bombing, there are the known results of the submarine attacks of the World War. No direct relationship can, of course, be established between the effectiveness of aircraft bombing of surface vessels and of submarine torpedoing of them. However, the analogy is sufficiently close to afford an approximation to the probable results of aircraft bombing. The aircraft bombs can undoubtedly exert the same damaging effect against the surface vessels as do the torpedoes of the submarines. The airplanes have speed and altitude to counter-balance the concealment enjoyed by the submarine.

Submarines of the Central Powers sank the following surface vessels during the World War:

<u>No.</u>	<u>Type</u>	<u>Tonnage</u>
9	Battleship	124,645
12	Cruisers	118,009
4	Light Cruisers	19,230
22	Flotilla Leaders and Destroyers	16,620
3	Torpedo Boats	628
18 Misc.	{ Sloops { Gunboats { Mine Sweepers	19,290
9	Submarines	3,900
77	Totals - tons	302,322
62	Fleet Auxiliaries	300,364
	Grand Total - tons	602,686

As early as 1921, General Douhet published his belief that the trend in military bombing airplanes should be toward greater air endurance (range), so that less and less of an enemy's territory

ry would be immune to their attacks. General Douhet also advocated concentrating all of a country's air effort in long-range bombers, even to the exclusion of observation aircraft for the Army and Navy. He stated that for a country to provide other types of aircraft was to detract from the main effort. His thesis was predicated, principally, upon the premise that fighter aircraft could not successfully stop the attacks of bombardment aircraft against land or sea objectives. Although this premise was stated fourteen years ago, it appears to be coming more and more into general acceptance as the years go by. The tremendous difficulties presented in obtaining information of a bombardment formation's approach are intensified when such formation can approach from any point of the compass, and at almost any altitude within the capacity of the ceiling of the aircraft, and at a speed which, if it has not already reached 200 miles an hour, will soon do so.

Tacticians are fairly well agreed that successful results against the bombardment airplanes themselves will probably have to be secured by attack against these airplanes on the ground, when they are refueling and re-arming; by destroying the facilities of their bases, and, to a lesser extent, by attacking them in the air, especially upon their withdrawal after bombing an objective. The time lost in finding the objective and completing the bombardment may furnish the necessary element of time required for the fighter airplanes to place themselves across the path of the hostile bombardment in a position to attack them on the way back to their base.

Air Commodore Charlton, in his recent book, "War From the Air, Past, Present and Future," presents General Douhet's arguments and then proceeds to state the air-line distances from the frontiers of the various countries of Europe to the vital objectives of neighboring countries. If he does not definitely accept General Douhet's theory that hostile air effort will be concentrated upon attacking the vital objectives to be found in the enemy's country, he at least indicates that such a course of action would afford results redounding to the advantage of that country possessing the shortest lines of operation. An apparent inconsistency in this respect is Air Commodore Charlton's statement that bombardment would probably operate from bases far in the rear of the frontiers, in order to secure pro-

tection for the air bases. It is obvious that to do so would considerably lengthen the lines of operation for the bombardment airplanes and might thus result in converting an advantage in this respect into a disadvantage where the enemy country operated from bases close up to their own frontier. Air Commodore Charlton emphasizes the point that correspondingly greater effect can be brought to bear against enemy objectives the shorter the lines of operation become.

As fleets have developed, naval powers have studied the conversion of commercial vessels to fleet uses in time of war. In general, the experience has been that an effective conversion which would include the installation of protective armor and the elaborate fire control systems of naval vessels required too great a time to permit having the commercial vessels made available in time to be used effectively in the war. It does not appear that this experience will be repeated in the case of converting commercial airplanes to military use. This is due to the fact that protective armor has not been found suitable for use upon military airplanes, and to the further fact that most of the installations and equipment required for the successful operation of military airplanes will also be required for the satisfactory operation of commercial planes. This makes the problem of conversion a far simpler one in the case of aircraft than in the case of surface vessels. It is probable, however, that in making such a conversion, the saving in time may make it worth while to accept certain shortcomings in the military installations which are placed in the commercial airplane. For example, a commercial airplane of an equal gross weight with a given bombing airplane may not, after conversion, be able to carry more than perhaps half of the bomb weight of the military airplane, and it may have to carry this weight on racks mounted beneath the wings or fuselage, rather than in internal bomb bays, where they are protected from head resistance as they are in the military bomber.

All these considerations confront the student of the possibilities of air warfare of the future. As has been the case with the development of other forms of the military art, it may be expected that the final air strategy and tactics at the end of the next major war will be far different from what is visualized after a merely theoretical approach to the subject.

WAR TIME AIRMEN HOLD REUNION

MEMORIES of war-time days were revived on the occasion of the recent visit to the Air Corps Technical School at Chanute Field, Rantoul, Ill., of members of the former 267th Aero Squadron which was station-

ed at this field during the War. Members of this Squadron had a reunion in Champaign, Ill., and were accorded permission to visit Chanute Field in a body. Altogether, 22 of these World War veterans gathered in this well known college town, some of them coming from localities over 900 miles distant in order to meet the "Gang."

The Reunion was an inspiration and a success from every standpoint, and it was felt that every member present was well repaid for the time and money expended in making the effort to come to Champaign.

After the meeting was convened, a good fellowship session was held for an hour, everyone renewing old acquaintances and talking over old times. Then they gathered around the piano and sang the old songs they loved so well when the squadron was stationed in England.

The election of Louis K. Handorf and Lloyd Hessey, both of Indianapolis, as President and Secretary-Treasurer, respectively, for the ensuing year, was followed by a discussion as to the meeting place for the 1936 Reunion, and it was voted to hold it on May 31st at Indianapolis, Ind.

Throughout the entire meeting, different comrades spoke of the various happenings of the old 267th Squadron back in 1918. All letters and telegrams which had been received in the past 60 days from the different members residing in various parts of the United States were read and greatly enjoyed by all present. Many a laugh and a joke was had during the reading of these letters.

Touching on the visit to Chanute Field, Lee Stonebraker, retiring President, in recording the minutes of the Reunion, stated:

"Our experiences at Chanute Field were very different from the time we served there in 1918. We were met at Headquarters by Col. Junius Jones, Commandant of Chanute Field; Major Carey; Captain Anderson, Adjutant of the Post, and Captain Goddard, an authority on National Aerial Photography. These officers escorted us through the Field, the first stop being made at the Aerial Photography School where we saw a map of the City of Chicago, which was approximately 12 x 27 feet in size, taken over the City of Chicago by numerous ex-

posures and pieced together absolutely faultlessly, being accurate in every respect. We also saw one of the greatest collection of aerial pictures that have ever been taken for the United States Government, and I think I am safe to say any place in the World.

They also explained in detail how these pictures were taken, and told us of one of the big projects of the Government at this time, that is, the making of aerial maps taken from an altitude of 25,000 feet. These different pictures, which look like a zigzag puzzle at the present time, will be fastened together accurately to make the first and only accurate aerial map of various areas of this size in the world. We saw among other things aerial cameras ranging in cost from \$3,000 to \$8,000; also moving pictures; how films are stored in a modern frigidair unit, and other equipment too numerous to mention.

From this building we went to one of the barracks at the northeast part of the field, equipped with a lounging room, pool tables, etc. From here the group was escorted to the old building which we would call the E. and R. building, known to the Squadron as the "Erection and Repairing of Airplanes Building," but now called the Woodworking Department. In this building we saw the modern way of repairing wings, doping of wings, instrument testing room, the propeller room, and the general repair of the wings and fuselage. This building is being changed shortly to accommodate work on all-metal planes, the wooden planes giving way to the all-metal planes. This work was explained to us very thoroughly by civilian instructor in charge, Mr. Browning. Here we learned that Mr. Drinkwater, known to most of the old gang, was still on duty.

Our next stop was at the Engine Testing Room. This building is given over to the repairing and reconditioning of airplane motors. We had a very interesting lecture on the tearing down and repairing of the modern airplane motors by civilian instructor, Mr. Jackson. He stated what they are trying to achieve is for every cubic inch of displacement in the motor to produce more horsepower. We saw motors ranging from 400 horsepower to 700 horsepower. There are two different types of motors used at the present time, the whirlwind motor and the liquid-cooled V-type stationary motor. He also gave us a very interesting discussion on superchargers.

From here we were taken to the barracks of the 267th, which looked very similar excepting the squadron now has a very nice lounging room in one end, being equipped with easy chairs, radio, magazines, smoking stands, etc., Instead of having double deck beds as we had, single

beds are now used, with about twice the space between them as when we were at Chanute, otherwise the appearance of the barracks is practically the same as when we were stationed there.

We were next escorted to the hangar directly south of the barracks; these hangars were formerly divided into two sections, the partition now having been removed to accommodate the large bombing planes and the much larger planes they are using today than during the time of the war.

We next walked to the center of the field, where they have erected a new two-story building where the flyers obtain each hour of the day radio broadcasts and weather reports from all the commercial and government fields of the United States. They have divided the Country into 4 zones and know the weather conditions from Portland, Maine, to Portland, Oregon, every hour of the day. This is also a checking-in and checking-out station for Army flyers.

Photographic Officer of the Post, Captain Goddard, next took a picture of all the fellows of the 267th who attended this reunion, in front of one of the new type planes. This picture was taken at 5:30 p.m., and is a very good example of the high type photographic work they are doing at Chanute Field.

The surprise of the day followed when we were taken to one of the former hangars which is now occupied as an enlisted men's and Noncommissioned Officers' mess hall for the entire field. Here Major Carey, Post Mess Officer, had provided a fine "Dutch Lunch" for everyone present. You have no idea what satisfaction and thrill this gave all the members present to sit down together again in the old field for mess.

Returning to Champaign following their enjoyable visit to Chanute Field, the veterans attended a banquet at the leading hotel, and a good time was had by all. The chief entertainer was a member of the old outfit, Victor J. Beasley, assisted by Harry Curzon, a Champaign ex-Service man. Describing his various feats of legerdemain, the minutes state:

"He took dollar bills out of our pockets, burned them up, and returned them to us in a lit cigarette. He also took quarters away from us and returned them to us in a fresh egg, breaking the shell and returning the money within the egg; also cutting a banana in three parts and never cutting the skin; so if any of you fellows happen to meet this man in your travels you had better watch your step. He is liable to take out your gold fillings."

Following speeches by incoming and retiring officers, the banquet came to a close with the winging of "Old Lang Syne" by all present.

We wonder how many more war-time out-

fits have banded together and are keeping fresh the memories of their war service as is being done by the veterans of the 267th Squadron? All of us are wont to allow our memories to drift back to bygone days and, whether it is an actual fact or not, talk of them as "the good old days."

The example set by the Commanding Officer of Chanute Field and the officers under him in according all possible courtesies to the visiting veterans is worthy of emulation by every army post in the country. These veterans, inspired solely by patriotic motives, answered their country's call in a time of emergency. Their service then was most highly appreciated and they were heroes in the eyes of all. But, alas, their heroic deeds and the many sacrifices they made for their country's cause are all too soon forgotten. Who has a better right to expect the hand of friendship and courtesies from military men than the war veteran?

---oOo---

CRISSY FIELD COMPLETES AIRPORT QUESTIONNAIRES.

The Chief of the Air Corps recently sent a letter of appreciation to the Commanding Officer, Crissy Field, Calif., expressing his satisfaction on the excellent performance of Crissy Field in completing within a very short period the questionnaires covering airports in the San Francisco Bay Strategic Area. The Commanding Officer also supplied excellent photographs of each of the airports covered, and the record thus furnished forms valuable information for the Office Chief of the Air Corps and the General Headquarters Air Force in preparing training exercises and maneuvers, as well as plans covering the area concerned.

The progress throughout the Air Corps in completing these questionnaires has been satisfactory. It is probable that in many cases questionnaires have been completed and are being held until all questionnaires covering the area are completed, when all will be forwarded together. When all these questionnaires are received the Air Corps will have a record of over 600 airports, with information in sufficient detail to enable the formulation of plans for training exercises and maneuvers for all strategic areas of the Continental United States.

---oOo---

Colonel Alva J. Brasted, Chief of Chaplains, was a recent visitor at Kelly Field, Texas, for the purpose of giving a character building talk to the personnel at that station. This was his first official visit as Chief of Chaplains to all Regular Army posts, including CCC Camps.

Colonel Brasted was accompanied by Col. Jacob E. Fickel, Commandant, and Captain E.R. Martin, Chaplain, at Kelly Field.

V-6822, A.C.

WEATHER FLIGHTS BY PILOTS OF WASHINGTON NATIONAL GUARD

By the News Letter Correspondent

Washington's 41st Division Aviation, National Guard, Felts Field, Spokane, commanded by Major Robin A. Day, Air Corps, Instructor, has just completed a unique record that has brought distinction to both the commissioned and enlisted personnel of that organization.

Reported by Malcolm Rigby, Felts Field airways weather observer, as being the only National Guard Air Corps unit in the United States to render such a service, the 41st Division Aviation has just completed one year of making volunteer "weather hops" to the higher altitudes.

During the past year Regular pilots at seven Army and Navy stations, each, have assisted the Weather Bureau with its experimental studies of the upper weather conditions.

The inauguration of "weather hops" started on July 1, 1934, with pilots of the 41st Division Aviation receiving no compensation other than gasoline mileage for their cars to the field. For the first few months, the flights were made at 1:00 a.m., so as to correspond with weather reports secured from similar flights in the eastern section of the country. Douglas O-38E Observation planes were used generally for the work, with the device that holds the weather recording instrument installed on the left wing.

The airplane was equipped with oxygen for use by the pilots at higher altitudes. The radio equipment consisted of the SCR 134 set, through which communication was kept with either the Division Aviation ground station or Department of Commerce station.

During the 365 days, flights were made every day with the exception of 56 days. Six days of extremely bad weather made weather flights impossible. On 43 days the airplanes were away on extended navigation flights, and on 7 days the weather recording instrument was out of commission. On 11 days, two flights were necessary because of bad conditions. There were a total of 320 flights, ranging in altitude from 6500 to 22,300 feet. The average altitude was 18,500 feet. An average of 80 minutes was necessary to complete each flight, or a total of 440 hours flying time for the year.

"During all this time there were only two occasions when the pilot did not return to Felts Field," related Mr. Rigby, "and that was because the clouds closed in, making landing necessary at Pasco and Deer Lake, Washington.

This is the first time that upper air current observations have been made in the Northwest. From these observations we discovered that over Spokane we have the lowest mean temperature in the

United States, and also the highest humidity.

At 17,000 feet altitude we found a temperature of 40 degrees below freezing. From this we have determined by our observations that this temperature is lowest when storms are approaching this area.

From data gathered on these flights we are now determining the type of clouds in which ice is most encountered by airplanes. Comparing our night and day flight records, we have learned that there is a 30 degrees temperature inversion in the night flights."

During the weather flights the pilots and observers used 12 tanks of oxygen. Weather Bureau rules by which the flights were made provided that, after reaching certain definite altitudes, the pilots should fly level for a brief time in order to permit the weather instrument to make the proper recordings.

On these flights every pilot agrees that he received exceptional and valuable training, particularly in blind and instrument flying. Many of the flights required navigation through several layers of clouds, and landings with none too high ceilings. In instances of low ceilings voice communication was maintained with the field stations.

Felts Field, with its beacon and its boundary well lighted, proved to be an excellent base from which to carry on such operations during the night. This field is practically two miles long and more than three-quarters of a mile wide.

Closeness of the airport to Spokane also proved beneficial as pilots coming down through bad weather were able to check their bearings by the light spot created in the weather from thousands of lights in the city.

"The work by the 41st Division Aviation is a splendid example of cooperation between two branches of government, and the Weather Bureau has nothing but unlimited praise for the outstanding work by the 41st Division National Guard Aviation," said Mr. Rigby.

While some pilots, with more time available from their private business than others, did more Weather Bureau flying, every pilot in the Division Aviation assisted with the flights. Each pilot got at least 10 hours of weather flying.

"I am proud of the record made by the pilots in the organization, who started making the weather hops before my assignment with the squadron," said Major Day. "I was glad to see the policy continued."

A contract for weather flights has been awarded a commercial operator.

---oOo---

B I O G R A P H I E S

LIEUT.-COLONEL MILLARD F. HARMON, JR.

Lieut.-Colonel Millard F. Harmon, Jr., Air Corps, Commanding Officer of the 20th Pursuit Group at Barksdale Field, Shreveport, La., was born at San Francisco, Calif., January 19, 1888.

Following his graduation from the United States Military Academy June 12, 1912, he began his military career as a second lieutenant of Infantry, and was stationed successively in Minnesota, Kentucky, Texas, and the Philippines. While serving with the 27th Infantry he was, in November, 1915, attached to the Aviation Section, Signal Corps, and assigned to undergo flying training at the Signal Corps Aviation School at San Diego, Calif. Completing this course on October 15, 1916, he was later attached to the 1st Aero Squadron with the Punitive Expedition into Mexico.

In February, 1917, he was one of three American officers sent abroad to go through the French schools with a view to acquiring a knowledge of methods employed in France for their training of aviation personnel.

During the World War, Lieut.-Col. Harmon was on duty connected with the inspection and laying out of landing fields and, in addition, performed various other staff assignments. For a brief period he commanded the First Air Depot, and later served as pilot with French Escadrille 65. For his service with this organization he was highly commended by the commander of the French Combat Squadron No. 2, who stated that he (Major Harmon) insisted in taking part in all of the patrols of that Escadrille and had made besides a great number of voluntary patrols, thus setting the very best example of enthusiasm and of scorn of danger.

Recalled from duty in France in May, 1918, Lieut.-Col. Harmon was ordered to Washington and assigned to duty as Chief of the Flying Branch, Schools Section, Office of the Director of Military Aeronautics. He was rated Junior Military Aviator, June 16, 1917. On August 6, 1918, he was designated as Assistant Chief of the Training Section, in charge of heavier-than-air training.

Relieved from duty in Washington in October, 1918, he was assigned to the command of the First Provisional Wing at Mineola, L.I., New York, and served in this capacity until January, 1919, when he was ordered to Panama to assume command of the air forces to be placed in operation in the Canal Zone. In addition to serving as Commanding Officer of France Field, Panama, he also performed the duties of Department Air Service Officer, Panama Canal Department.

In April, 1921, Lieut.-Colonel Harmon was assigned to duty in the Office of the Chief of Air Service, serving there until January, 1922, as a member of the

Advisory Board and then in the Training and War Plans Division.

Assigned as student at the General Service Schools, Fort Leavenworth, Kansas, in the fall of 1923, he graduated therefrom in June of the following year and then went to school another year, this time at the Army War College. His graduation was followed by several months' duty at Bolling Field, D.C., as commanding officer, and in September, 1925, he was assigned as a member of the War Department General Staff.

With the reestablishment of March Field, Riverside, Calif., as a Primary Flying School, he was, in April, 1927, assigned as Commandant thereof, performing this duty until August, 1930, when he was placed on duty at Fort Leavenworth, Kans., as Instructor at the Command and General Staff School. In June, 1932, he was assigned to duty at Barksdale Field, La., as Commanding Officer of the 20th Pursuit Group. By virtue of this assignment, he holds the temporary rank of Lieut.-Colonel.

Lieut.-Col. Harmon has over 2,000 flying hours to his credit. For his service overseas during the World War, he received from the French Government the Croix de Guerre with star.

---oOo---

LIEUT.-COLONEL GEORGE C. KENNEY

Recognized as one of the outstanding officers in the Air Corps, Lieut.-Colonel George C. Kenney received concrete evidence of the high regard in which he is held by his superiors when, upon the organization of the GHQ Air Force on March 1, 1935, he was promoted from Captain to the temporary rank of Lieut.-Colonel and assigned to duty as Assistant Chief of Staff, G-3, GHQ Air Force, Langley Field, Va. He entered the military service during the World War and served overseas for a period of 18 months, all but two months of this service being with the 91st Aero Squadron.

Born at Yarmouth, Nova Scotia, Canada, August 6, 1889, he passed through grammar school and high school in Boston, Mass., and attended the Massachusetts Institute of Technology, Cambridge, Mass., for three years. For six years thereafter he was engaged in civil engineering work and as a contractor and, on June 2, 1917, enlisted as a Private in the Aviation Section, Signal Corps, with a view to becoming a flyer. Assigned to pursue the aeronautical ground school course at the institution of learning he previously attended - the Massachusetts Institute of Technology - he was, upon the completion of this course, assigned on July 25, 1917, to Hazelhurst Field, Mineola, L.I., New York, for flying training, and passed the required tests for the rating of Reserve Military Aviator on September 14, 1917.

On November 8, 1917, he accepted a com-

mission as 1st Lieutenant, Aviation Section, Signal Corps, and, assigned to active duty with the 14th Foreign Detachment, he proceeded overseas with this organization and began advanced flying training on December 16, 1917, at the Third Aviation Instruction Center at Issoudun, France.

Upon the completion of this advanced training, on February 13, 1918, he was a student for a brief period at the First Corps Observation Training Center at Amanty, France, and on February 22, 1918, was assigned to the 91st Aero Squadron. He was on duty with this organization for a period of nearly 16 months, during which time it was under the orders of the French 8th Army from May 24 to September 4, 1918; the First American Army from September 4 to November 16, 1918, and the Third American Army from November 16 to April 9, 1919.

Lieut.-Colonel Kenney piloted the Salmson type airplane on the Toul and Meuse-Argonne Sectors, accumulating a total of about 110 flying hours over the front lines and engaging in twelve combats. He was credited with the destruction in aerial combat of two enemy aircraft, and was awarded the Distinguished Service Cross for extraordinary heroism in action near Jametz, France, October 9, 1918, the citation accompanying same being as follows:

"This officer gave proof of his bravery and devotion to duty when he was attacked by a superior number of aircraft. He accepted combat, destroying one plane and drove the others off. Notwithstanding that the enemy returned and attacked again in strong numbers, Lieutenant Kenney continued his mission and enabled his observer to secure information of great military value."

Lieut.-Col. Kenney was promoted to Captain, March 18, 1919. He acted as flight commander while the 91st Squadron, serving with the Army of Occupation, was located at Treves and Coblenz, Germany. He was detached from the Squadron on June 2, 1919, and returned to the United States, being stationed at Mitchel Field, L.I., New York, until his transfer to Kelly Field, Texas, in August.

Assigned to the 8th Aero Squadron at McAllen, Texas, on October 12, 1919, he served for ten months as pilot and commanding officer of this squadron, flying the DH-4 airplane on border patrol missions. Following two months of temporary duty at Fort Knox, Ky., where, flying the DH4-B airplane, he was engaged in artillery adjustment work, he was detailed on November 1, 1920, as a student at the Air Service Engineering School at McCook Field, Dayton, O.

For two years, following his graduation from the Engineering School, he was on duty as Air Service Inspector at

the plant of the Curtiss Aeroplane and Motor Corporation at Garden City, Long Island, N.Y.

Returning to the Engineering Division at McCook Field in June, 1923, he occupied successively the positions of Chief of the Factory Section, Contracting Officer, and Chief of Production Engineering.

Detailed as a student at the Air Corps Tactical School, Langley Field, Va., in September, 1925, he completed the course in June of the following year. He next completed the one-year course at the Command and General Staff School, Fort Leavenworth, Kansas, and returned to Langley Field to assume the duty of Instructor at the Tactical School.

From September, 1932, to June, 1933, he was a student at the Army War College, Washington, D.C., and, upon his graduation, was assigned to duty in the Plans Division, Office of the Chief of the Air Corps, where he remained until he was assigned to staff duty with the GHQ Air Force.

---oOo---

A CLUBHOUSE FOR FLYERS AT PITTSBURGH

The "Flyers Club," erected and furnished by the Commissioners of Allegheny County, Pittsburgh, Pa., for the benefit of all pilots, military and civilian, was formally dedicated on Saturday, May 18th. Colonel Charles C. McGovern, Chairman of the Board of Commissioners, was the prime mover in seeing that the Club was rushed to completion in record time, about sixty days. He personally spent many hours at the airport, seeing that all went well with the Club. Among Air Corps officers who were guests of the Flyers Club on the opening day were General Westover and Captain Trunk, of the Office of the Chief of the Air Corps; Colonel Frederick L. Martin and Captain Elmer E. Adler, of the Army War College. Members of the Pennsylvania National Guard Air Corps present on this occasion were Major Victor Dallin, Captain George R. Dickens and Lieut. Claude Craven.

The Flyers Club is Colonial in design, and the Colonial spirit has been followed throughout the house. It has accommodations for twenty pilots overnight, and to date there have been approximately fifty Air Corps pilots who have made use of its accommodations.

All Air Corps officers on cross-country flights are invited to make use of the Flyers Club as guests of Allegheny County.

---oOo---

A Board of Air Corps officers, consisting of Brigadier Generals James E. Chaney, Frank M. Andrews, Henry C. Pratt and Lt.-Colonel Arnold N. Krogstad, was appointed by the War Department for the purpose of making flying proficiency classification of all commissioned officers of the Air Corps, under provisions of W.D. Circular 6.

V-6822, A.C.

AUTOMATIC DEVICE FOR SWITCHING FUEL TANKS

THE Air Corps Materiel Division is constantly striving to develop various aids for the airplane pilot to safeguard flying to the utmost possible extent. In the efforts put forth to prevent forced landings due to fuel system difficulties, the Division has developed a device which will insure the continuous operation of the engine in the event of the failure of the pilot to "switch tanks" at the proper time. This aid to the pilot is embodied in a fuel-system design in which the changing from an empty tank to a full one is performed automatically.

The pilot is warned by a light when the main or auxiliary supply is exhausted, but fuel is drawn from the other supply or reserve, whether the pilot turns the fuel cock or not. Whether the desirable features of this fuel system will warrant the additional complication can only be determined by installation in an airplane and through experimental and service test, which will probably extend over a period of two years.

Another proposal is the installation of a warning device which will indicate when the fuel supply is exhausted sufficiently early to enable the pilot to switch tanks before the engine stops. Such a signal, consisting of a red light

on the instrument panel, is being developed. One of the actuating devices is merely a fuel pressure-operated switch which will light the signal when the pressure drops, giving the pilot ten seconds or more in which to switch tanks. A quantity of such units is being procured for installation on airplanes in service. The other devices operate the signal switch by means of a float mechanism and incorporate a reserve of two or four quarts of fuel which will operate the engine from one to three minutes after the pilot has been warned. One of these units has undergone a successful flight test and will be service tested.

Of the proposed systems, Materiel Division engineers believe that the simple pressure-operated switch and signal light will prove most satisfactory, due to its lack of floats, levers, check valves, and extra plumbing, which are potential sources of trouble. The belief is further expressed that a short period of warning, requiring immediate action, will be more effective than one of a minute or more, as in the latter case the pilot might, if busy, postpone turning the fuel cock, depending on the longer period of time, misjudge the time, or have his attention turned to other matters.

---oCo---

TEMPORARY PROMOTION OF AIR CORPS OFFICERS

To Lieutenant-Colonel

Major William B. Mayer, 19th Composite Wing, Albrook Field, assigned as Commander, Panama Air Depot, France Field, Panama, July 11, 1935.

To Major

Captain Harold G. Peterson assigned as Commanding Officer, 65th Service Squadron, Luke Field, T.H., July 3, 1935.

Captain Ray E. Clark assigned as Commanding Officer, 19th Pursuit Squadron, Wheeler Field, T.H., July 3, 1935.

1st Lieut. Russell L. Williamson assigned as Supply Officer, Fairfield, O., Air Depot, June 30, 1935.

Captain Gilbert T. Collar assigned as Supply Officer, 19th Composite Wing, Albrook Field, Canal Zone, July 11, 1935.

Captain Albert B. Pitts assigned as Commanding Officer, Philippine Air Depot, July 10, '35.

To Captain

1st Lieut. Willard R. Shephard assigned as Intelligence and Operations Officer, 2nd Observation Squadron, Philippines, July 10, 1935.

1st Lieut. George W. Hansen assigned as Flight Commander, 28th Bombardment Squadron, Philippines, July 10, 1935.

1st Lieut. John P. Kenny assigned as Flight Commander, 28th Bombardment Squadron, Philippine Dept., July 10, 1935.

To Captain (Continued)

1st Lieut. Russell Scott assigned as Flight Commander, 5th Bombardment Squadron, Mitchel Field, N.Y., June 26, 1935.

1st Lieut. Dixon M. Allison assigned as Engineer and Armament Officer, 1st Pursuit Group, Selfridge Field, Mich., June 30, 1935.

1st Lieut. Jack W. Wood assigned as Flight Commander, 4th Observation Squadron, Hawaiian Department,

1st Lieut. Lewis R. Parker assigned as Engineer and Armament Officer, 5th Composite Group, Hawaiian Department.

1st Lieut. Walter C. White assigned as Flight Commander, 1st Bombardment Squadron, Mitchel Field, N.Y., June 30, 1935.

1st Lieut. Harry G. Montgomery, Jr., assigned as Flight Commander, 50th Observation Squadron, Luke Field, T.H., July 4, 1935.

1st Lieut. Raymond L. Winn assigned as Flight Commander, 26th Attack Squadron, Wheeler Field, T.H., July 4, 1935.

1st Lieut. Richard H. Lee assigned as Intelligence and Operations Officer, 26th Attack Squadron, Wheeler Field, T.H., July 4, 1935.

To 1st Lieutenant

2nd Lieut. Benjamin J. Webster assigned as Transport Officer, 75th Service Squadron, Wheeler Field, T.H., July 4, 1935.

To 1st Lieutenant

2nd Lieut. Edwin G. Simenson assigned as Supply Officer, 50th Observation Squadron, Luke Field, T.H., July 4, 1935.

2nd Lieut. Daniel S. Campbell assigned as Supply Officer, 26th Attack Squadron, Wheeler Field, T.H., July 4, 1935.

2nd Lieut. William G. Beard assigned as Communications Officer, 72nd Bombardment Squadron, Luke Field, T.H., July 4, 1935.

2nd Lieut. Ivan L. Farman assigned as Signal Officer, Air Corps Technical School, Chanute Field, Ill., June 30, 1935.

2nd Lieut. John J. Hutchison assigned as Armament Officer, 72nd Bombardment Squadron, Luke Field, T.H.

2nd Lieut. Donald L. Hardy assigned as Supply Officer, 50th Observation Squadron, Luke Field, T.H.

2nd Lieut. Byram Bunch assigned as Armament Officer, 23rd Bombardment Squadron, Hawaii.

2nd Lieut. John M. Price assigned as Armament Officer, 25th Bombardment Squadron, France Field, Panama, June 16, 1935.

2nd Lieut. Samuel A. Mundell assigned as Communications Officer, 44th Observation, Albrook Field, June 28, 1935.

2nd Lieut. Robert H. Landry assigned as Supply Officer, 78th Pursuit Squadron, Albrook Field, Canal Zone, June 28, 1935.

2nd Lieut. Charles A. Clark, Jr., assigned as Commanding Officer, 6th Photo Section, Philippine Department, July 10, 1935.

---oOo---

The following-named Air Corps officers, holding temporary increased rank, were assigned to other duties but continue to hold such increased rank:

Lieut.-Colonel Junius H. Houghton from duty with Panama Air Depot to Commanding Officer, 6th Composite Group, France Field, Panama.

Captain Archibald Y. Smith as Flight Commander, 49th Bombardment Squadron.

Captain Robert E.L. Choate as Intelligence and Operations Officer, 49th Bombardment Squadron, Langley Field, Va.

1st Lieut. David H. Kennedy as Supply Officer, 49th Bombardment Squadron, Langley Field.

1st Lieut. David H. Baker from Armament Officer, 78th Composite Squadron, Albrook Field to duty as Adjutant, 16th Pursuit Group.

Captain Elmer J. Rogers, Jr., from 4th Observation Squadron, Luke Field, to Intelligence and Communications Officer, 18th Composite Wing, Fort Shafter, T.H.

1st Lieut. Lawrence B. Kelley from Armament Officer to Supply Officer, 25th Bombardment Squadron, France Field, Panama.

Captain Charles G. Goodrich from 36th Pursuit Squadron, Langley Field, to duty as Supply Officer, 58th Service Squadron.

1st Lieut. Frederick E. Calhoun from 13th Attack Squadron to Adjutant, 3rd Attack Group, Barksdale Field, La.

Captain Homer L. Sanders from 26th Attack Squadron, Wheeler Field, to Flight Commander, 6th Pursuit Squadron, Wheeler Field.

1st Lieut. Donald L. Hardy, 50th Observation Squadron, to Supply Officer, 4th Observation Squadron, Luke Field, T.H.

---oOo---

OFFICERS RELIEVED FROM TEMPORARY RANK

Colonel John F. Curry relieved from duty as Commandant, Air Corps Tactical School, Maxwell Field, Ala., June 30, 1935.

Lieut.-Colonel Claude E. Duncan relieved from duty with 1st Wing, March Field, Calif., July 26, 1935.

Captain Robert L. Easton from duty with 26th Attack Squadron, effective upon date of departure from Hawaii.

---oOo---

CHANGES IN STATION OF AIR CORPS OFFICERS

To Bolling Field, D.C.: Captain Henry R. Baxter from Panama. Relieved from temporary rank effective on date of departure.

To Kelly Field, Texas: 1st Lieut. Charles E. Densford, 4th Observation Squadron. Relieved from temporary rank upon departure from Hawaii.

To Langley Field, Va.: Major Hugh C. Downey, from Mitchel Field, N.Y., to duty with station complement. Relieved from temporary rank, June 26, 1935.

To San Diego, Calif.: Captain Leland C. Hurd from duty as Air Corps representative at Curtiss Aeroplane and Motor Co., Buffalo, N.Y., to duty as Air Corps representative at plant of Consolidated Aircraft Corporation.

To Fort Leavenworth, Kansas: Captain Harry A. Johnson for duty as student at Command and General Staff School.

RELIEVED FROM DETAIL TO AIR CORPS: 2nd Lieuts. Charles E. Brown, Donald F. Buchwald, Paul Burlingame, Stephen O. Fugua, Infantry; Richard T. Coiner, Jr., Cavalry; Horace L. Sanders, Field Artillery; Paul E. Ruestow, Corps of Engineers.

TRANSFERS: 1st Lieut. Leslie A. Skinner to the Ordnance Department, May 28, 1935, with rank from August 1, 1929.

PROMOTIONS: to 1st Lieutenant: 2nd Lieut. Louis E. Massie, rank June 7, 1935; 2nd Lieut. Stuart P. Wright, rank June 12, 1935.

ORDERS REVOKED: Relief of Major Phillips Melville from assignment and duty with 5th Composite Group and from temporary rank and his assignment to Randolph Field, Texas.

---oOo---

AIR CORPS OFFICERS TO ATTEND UNIV. OF MICHIGAN

The following-named officers were detailed for duty as students at the University of Michigan, Ann Arbor, September 16, 1935:

1st Lieuts. Louis E. Massie, upon completion of present course of instruction at Air Corps Technical School, Chanute Field; Robert W. Stewart, Fort Bragg, N.C.; 2nd Lieuts. Samuel O. Redetzke, 62d Service Squadron, Brooks Field, and Herbert H. Tellman, Supply Officer, 1st Pursuit Group, Selfridge Field, Mich. Two last named officers relieved of temporary rank, that of Captain, September 15, 1935.

BOEING TEST BOMBER, MODEL 299

The War Department recently issued the following announcement relative to a new type of Bomber constructed by the Boeing Company:

'Hailed as the fastest and longest range Bomber ever built, a giant four-engined all-metal airplane, today was brought to light by the Boeing Aircraft Company of Seattle after more than a year of work on the project.

Known merely as the Boeing 299, the huge craft shortly will undergo test flights before being submitted to the United States Air Corps in open competition with other types at Dayton, Ohio. These tests, it was announced, are expected definitely to stamp the plane as the most formidable aerial defense weapon ever offered this country, with far more speed and a substantially greater cruising range than any bomber ever before produced.

Military secrecy necessarily shrouds many details of the Model 299. Boeing officials said, however, that it would meet or exceed specifications of the Air Corps as set forth in a public call for bids and equipment.

Among other things, these requirements are known to call for a high speed of from 200 to 250 miles an hour at 10,000 feet altitude, for an operating speed of from 170 to 220 miles an hour at the same altitude, for an endurance at operating speed of from six to ten hours, and for a service ceiling of from 20,000 to 25,000 feet.

The Boeing "aerial battle cruiser" has a wing span of approximately 100 feet, length of 70 feet, height of 15 feet, and gross weight of about 15 tons. It is of the all-metal mid-wing type, equipped with four Hornet engines of over 700 horsepower each, and with the new Hamilton Standard three-bladed constant speed propellers. Clean streamlining is a feature, with retractable landing gear and tail wheel as further aids to speed. Officials declare the plane to be the first military type which will be able to complete a mission in the event one engine ceases to function.

A number of new armament installations, developed by Boeing engineers, are carried in addition to the latest types of flight and engine instruments, including an automatic pilot, two-way radio telephone equipment and a radio "homing" device. Air brakes are used for the first time in any American aircraft, with these as well as the craft's wheels and tires having been especially developed.

Construction is of typical Boeing semi-monocoque type, the structure consisting of longerons, skin stiffeners, bulkheads and smooth outside metal skin.

The Model 299 makes its bow as the latest in a long line of Boeing achievements dating from 1916. Among these in recent years have been the company's high-speed twin-engined bomber of 1931 and commercial transport plane of 1933, both of which established the current trend in aircraft design and construction.

An entire fleet of the transports, known as the Model 247-type, today is operating on the routes of United Air Lines, Pennsylvania Airlines, National Park Airways, Western Air Express and Wyoming Air Service. In addition, single-seater Boeing fighters are regular equipment at Army Air Corps bases, at Navy shore stations and on Uncle Sam's aircraft carriers."

---oOo---

BOARDS TO PASS ON PURSUIT AND CARGO PLANES

Under Special Orders of the War Department recently issued, two boards of Air Corps officers were appointed, to meet at the call of the president thereof, at Wright Field, Dayton, Ohio, on a date to be set by the Chief of the Materiel Division of the Air Corps, for the purpose of evaluating as to utility of type and landing and take-off characteristics, the two-place and single Pursuit airplanes submitted under circular proposals No. 35-48 and 35-49, and the cargo airplanes submitted under circular proposal No. 35-29.

Officers of the Board to consider the Pursuit types of airplanes comprise Lieut.-Cols. Millard F. Harmon, Jr., Barksdale Field, La.; Ralph Royce, Selfridge Field, Mich.; Adlai H. Gilkeson and Major Harold H. George, of Langley Field, Va.; Major Claire L. Chennault of Maxwell Field, Ala.; Captains Ross G. Hoyt of the Office of the Chief of the Air Corps, Washington, and Ployer P. Hill, of Wright Field, Dayton, Ohio.

The Board appointed to pass upon the merits of the cargo airplanes consists of Majors John F. Whiteley, Orlo H. Quinn and Captain Russell A. Wilson, Langley Field, Va.; Major Harrison W. Flickinger, of the Fairfield, O., Air Depot; and Captain Ployer P. Hill, of Wright Field, Ohio.

The proceedings of these Boards will be submitted to the Secretary of War, through the Chief, Materiel Division, Air Corps, pursuant to the provisions of Section 10 (b) Air Corps Act of 1926.

---oOo---

BOMBING COMPETITION BY 35TH PURSUIT PILOTS

The 35th Pursuit Squadron, Langley Field, Va., completed its gunnery and bombing, both practice and record. Lieut. Kroeger, Reserve, who reverted to inactive status June 30th, was high man with a total score of 1113.

Three teams of three men each were organized for an informal competition in formation bombing. Each man dropped six bombs, a total of 18 bombs per element, with a possible total of 450 points. Captain Dorr's element won the competition with 300 points, Major Waller's was second with 295, and Captain Peaslee's third with 161 points.

NOTES

— FROM —



AIR CORPS FIELDS

41st Division, Washington National Guard.

The encampment of the 116th Observation Squadron, Washington National Guard, with the 41st Division National Guard troops of Washington, Oregon, Idaho and Montana, at Fort Lewis, Wash., proved to be a rendezvous for Air Corps officers of the Regular Army.

Ranking first among the visiting Regular Army Air Corps officers at the 41st Division Aviation camp was Colonel Roy C. Kirtland of the Presidio of San Francisco, Air Officer for the 9th Corps Area. He was the senior instructor for the entire Division encampment. He lived under canvas with the Division Aviation for the entire two weeks and conducted the official camp inspection of the Division Aviation.

Captain Guy B. McNeil, Executive Officer from Crissy Field, Calif., was the Camp Inspector, and served as Division Air Officer on both the Division problem and 81st Brigade problem. He mustered the troops at the conclusion of the camp.

Captain Joe Bayley, Regular Army Air Corps Instructor for the California National Guard, flew to Fort Lewis with one of the California Douglas Observation planes for use by the Washington National Guard Air Corps. He represented the National Guard Bureau and also lived under canvas, as did Captain McNeil.

Captain Thomas W. Blackburn, from the National Guard Bureau, Washington, spent three days in camp, coming direct from the Nation's Capital over the Northern Transcontinental Airway to Fort Lewis. While in camp, he called on Adjutant General Maurice Thompson, of Washington, in company with Major Robin A. Day, Commanding Officer and Instructor of the 41st Division Aviation.

In company with an enlisted man, Captain Hez McClellan, of Bolling Field, landed at Fort Lewis in a Douglas "Duck." He remained 24 hours before resuming his journey.

On leave, Captain "Swede" Larsen and family drove into camp for an evening mess with Major Day, as did Major and Mrs. John M. Davies.

In a Douglas Observation airplane from Bolling Field came Captain Harry A. Halverson

and 1st Lieut. John B. Grow (M.C.).

During the first ten days of the Division encampment, the Fort Lewis Air Corps Detachment was encamped at Ilwaco, Washington, performing gunnery work.

Flying hours equal to approximately ten times around the world is the record hung up by pilots of the 41st Division Aviation, Felts Field, Spokane. With the close of the Fiscal Year, it is the belief of Major Robin A. Day, Commanding-Instructor, that his pilots have flown more hours than those of other National Guard Observation Squadrons.

Entering upon his tour of duty with the 41st Division Aviation, Major Day asked that every pilot in the organization average 205 hours for the year. His request has been considerably exceeded, as the average flying time for the 13 pilots is 296 hours, 20 minutes. Their total flying time for the year is 3498 hours, 35 minutes which, estimated at a cruising speed of 100 miles per hour, represents about 348,800 miles, or approximately ten times around the world.

When the Squadron entered on June 11th upon its annual encampment at Fort Lewis, Wash., the total flying time was 2924 hours, an average of 225 hours per pilot. During camp, which included an extended navigation flight by two 3-ship formations to San Diego, the total flying time was 574 hours and 35 minutes, or an average of 44 hours and 18 minutes per pilot for the 14-day encampment period. This does not include the time registered by the four observers in the Squadron, which is as follows:

Captain Robert Owen	133 hrs.,	55 min.
Lieut. Charles Holter	32 "	15 "
Lieut. Ellsworth C. French	177 "	55 "
Lieut. Dean Eshelman	102 "	10 "

"Every possible type of flying is included in this time," said Major Day. "Pilots in our organization have all taken extended navigation flights, including a squadron movement to Nashville and Miami. There have been individual navigation flights to Washington, D.C., and several southern points. Every pilot has his minimum of instrument flying time and night flying. We have rolled up lots of hours flying the beam, and have plenty of time on cooperative

missions with other arms of the service."

Individual flying time for each pilot follows:

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Maj. Robin A. Day	411:50	4:00	4:00	415:50
Capt. W.G. Foster	149:40	37:55	61:55	211:35
Capt. Claude Owen	382:10	20:05	20:05	402:15
Capt. L.C. Sherman	115:55	32:00	56:00	171:55
Capt. J.L. Walter	243:00	30:15	30:15	273:15
Lt. Byron Cooper	159:00	33:00	33:00	192:00
Lt. C. Hartnett	145:35	46:45	70:45	216:20
Lt. L. Heral	96:10	44:35	68:35	164:45
Lt. Dale Swartz	384:00	38:15	38:15	422:15
Lt. S. Wagner	145:20	40:20	64:20	209:40
Lt. H.R. Wallace	249:30	27:15	27:15	276:45
Lt. E. Corrigan	155:15	37:15	61:15	216:50
Lt. E. Malstrom	286:35	38:55	38:55	325:30

Note: A - Time to June 10, 1935; B - Camp time to June 22, inclusive; C - Camp time total; D - Total time.

Advanced Flying School, Kelly Field, Texas.

Class 22b of the Air Corps Advanced Flying School was graduated at Kelly Field on June 22, 1935.

Brig. General Oscar Westover, Assistant Chief of the Air Corps; Brig. General J.E. Chaney, Commanding the Air Corps Training Center; Brig. General Robert C. Foy, Commanding the 2nd Field Artillery Brigade; Colonel Jacob E. Fickel, Commanding the Air Corps Advanced Flying School, and Lt.-Colonel H.H.C. Richards, Assistant Commandant of the Air Corps Advanced Flying School, were in the reviewing stand to receive the Aerial Review, which was held at 8:00 a.m.

Graduation exercises were held in the War Department Theatre at 10:00 a.m. General Westover made a very interesting and instructive address to the students, who would do well to follow his timely advice. Following the presentation of diplomas, the graduates proceeded to their new stations. The previous issue of the News Letter contained the names of the graduates and their station assignments.

The following officers recently arrived at Kelly Field and were assigned to duties, as follows:

Captain C.E. Crumrine to Air Corps Advanced Flying School Detachment.

Captain Mark R. Woodward, Director of Ground School, also Officer in Charge Student Officers and Commandant of Cadets.

1st Lieut. R.F.C. Vance, Operations and Intelligence Officer of 41st Observation Squadron, and additional duty with A.C. A.F.S. Detachment.

San Antonio Air Depot, Duncan Field, Texas.

Warrant Officer and Mrs. W.E. Perkins and daughter were welcomed on June 26th as additions to the personnel of this station. Warrant Officer Perkins was formerly stationed at the New York Port of Embarkation, and he was assigned to this Depot for duty with the Signal Corps Radio Section.

The Depot regrets to announce the death in performance of duty of Mr. Joe C. Ramirez, 51, Civil Service Firefighter, which occurred on June 21st as the result of an apparently accidental fall from a fire truck while returning from fire drill. His skull was fractured and he died a few minutes afterward at the Kelly Field Station Hospital. Mr. Ramirez had served in the Depot Fire Department for the past 14 years, and for several years previously with the San Antonio Fire Department. His unflinching cheerful and friendly disposition and sterling character, as well as his absolute loyalty and devotion to duty, has won him the esteem of all at this station. Interment took place June 23rd in the Roselawn Burial Park, San Antonio. Surviving him are his widow and one daughter, 318 El Dorado St., San Antonio, and one sister.

Warrant Officer A.R. Trabold, of the Depot Supply Department, and family, departed July 1st on two months' leave.

Sergeant J.H. Price, of the Depot Transport Service, and Mrs. Price, departed on 60 days' furlough, July 2nd.

Luke Field, T.H., June 25, 1935.

Air Corps officers arriving in the Hawaiian Department on the Transport REPUBLIC on May 25th and assigned to this station were 1st Lieut. Chester P. Gilger, 2nd Lieuts. Harry S. Bishop, David N. Crickette (Air Corps); 2nd Lieuts. Dale E. Altman, Cady R. Bullock, William C. Capp, Henry R. Spicer, John P. Stewart (Reserve).

On May 29th, an "Aloha" flight was staged in honor of Lieut.-Col. Laurence F. Stone and other officers of the 18th Composite Wing who departed on board the U.S.A.T. REPUBLIC. A few of visiting Naval personnel from the Fleet on shore leave at the time were taken up on this flight to obtain a bird's eye view of the Fleet anchored in Pearl Harbor.

Hawaiian Air Depot, June 25th.

Lieut.-Colonel Laurence F. Stone relinquished command of the Depot when he sailed for the mainland on May 29th. Captain Edwin R. Page is at present commanding the Depot.

On the June Transport arriving on the 17th, Mr. Rudolph C. Miller, Shop Superintendent, is scheduled to return after an extended leave on the mainland. During this leave he spent considerable time at the Materiel Division.

Mr. Walter F. Hatfield, who is being transferred to Hawaii from Fairfield, is also expected to arrive on the June transport with his family.

The largest shipment of supplies ever received in the Hawaiian Air Depot within one week recently arrived from the mainland. The uncrating and storing of this material is keeping our force busy.

Rapid progress is being made in rebuilding the interior of the main Depot Supply Building, under direction of Captain C.P. Kane.

V-6822, A.C.



Some of the More Interesting Books
and Documents
Recently added to the Air Corps Library

A 00 U.S. 29, May 31, 1935. Aviation leaders plan national educational campaign. National Aeronautic Association Release June 1, 1935, 2p.

A 00 U.S. 29, May 31, 1935. \$10,000 cash prize offered. National Aeronautic Association Release June 3, 1935, 2p.

C 20.3, Russia 1. The Military Air Force on the eve of the general Autumn drills. Trans. by M.I.D. from "Vestnik Bozdushnovo Flota (Organ of the Air Command), No. 9, Sept. 1934. Tr. B-8872, 3p.

C 71.8 Russia 1. Light bombing aviation in combat with the aerial enemy. Trans. by M.I.D. from "Vestnik Bozdushnovo Flota (Organ of the Air Command) March and June, 1934. Tr. B-8657. 73p.

D 11.2/67. Painting magnesium alloys, by National Paint, Varnish and Lacquer Association, Inc. Circular 482, June, 1935, 185 p.

D 13.3/153. "Aviator"; an instrument for finding the wind and determining the angle of lead, by C. Plath. Trans. by M.I.D. from German. 4p.

D 13.3 Gyroscope 12. The Sperryscope, Vol. 7 No. 7. April, 1935, 16p.

629.1307/C69. A complete course for the aeronautical ground engineer, by Captain S.L. Collins, 1933. Vol. 3, 211 p.

629.1307/Sp8. Air License, the requirements, practical, theoretical and official for the award of certificates of competency in civil aviation, by T. Stanhope Sprigg, London, 1934, 114p.

629.1309/B78. History of aviation, with interesting records, by Major Edward M. Brown, 1932, 267 p. In this history, adventure and romance are outstanding. It explains the dreams and the dreamers, starting with Roger Bacon and his first experiment with ethereal gas in a hollow globe, 1250 A.D. and down to our present time.

629.181/H83. The stresses in aeroplane structures, by H.B. Howard, 1933. 264p.

---oOo---

Of late the Editor of the News Letter has been considerably handicapped in his efforts to put forth a truly representative Air Corps publication because a number of Air Corps Fields have not sent in contributions of material. Some of the fields are sending in contributions regularly, while others have not been heard from for some time.

Contributions are desired from every Air Corps activity, as well as from Air Reserve and Air Corps National Guard activities. The primary purpose of the News Letter is to disseminate information regarding military aviation and to keep Air Corps personnel informed of the activities at every Air Corps station, including Reserve and National Guard. Every member of the Air Corps is interested in hearing what is being done at all fields and stations and, unless the News Letter is given whole-hearted cooperation, it cannot be termed a truly Air Corps publication. It is desired that every activity be represented therein.

Thus far, the News Letter has been issued twice a month, and it is desired to continue to do so. The failure, however, of some Air Corps activities to forward material regularly makes this task increasingly difficult.

Air Corps fields and stations which have not been heard from for some time are:

Selfridge Field, Mich.

Mitchel Field, N.Y.

March Field, Calif.

Scott Field, Ill.

Chanute Field, Ill.

Fairfield Air Depot, Ohio.

Middletown, Pa., Air Depot.

Rockwell Field, Calif.

Barksdale Field, La.

Bolling Field, D.C.

Brooks Field, Texas.

All Reserve Activities.

National Guard Squadrons (who may well emulate the example of the Washington National Guard Squadron, which has been sending in some very interesting material).

Publicity officers are requested to send in material on the 5th and 20th of the month.



TECHNICAL INFORMATION

ENGINEERING AND NEWS



AIR CORPS MATERIEL DIVISION

Copying Camera.

An engineer from the Equipment Branch made a visit to the R.R. Robertson Company, Chicago, Ill., to investigate the practicability of installing an adapter and adjusting mechanism for holding a half-tone screen in the Type A-2 copying camera to enable negatives to be made for offset printing work. The change was found to be feasible and, as a result, it was recommended that the five Type A-2 cameras being procured have the change incorporated, and that all the Type A-2 cameras in the service be reworked.

Tractor to be Transported by Airplane.

An engineer from the Equipment Branch made a visit to the Cleveland Tractor Company, Cleveland, Ohio, in connection with a study to determine the requirements of a light-weight tractor which can be transported by air. Various models were inspected and demonstrations of performance witnessed.

New Material Developed for Exhaust Stacks.

The material for exhaust stacks and exhaust equipment has presented a problem of corrosion and scaling due to the use of gasolines containing relatively high proportions of ethyl fluid. Combustion of these fuels results in the formation of lead and bromide compounds which are quite corrosive. The attack on the plain carbon steel and soft iron stacks was sufficiently severe as to cause accumulations of corrosive products on the stacks which upon being blown out caused frequent fires. The stacks also became badly rusted. The first metal to be used for replacement was a stainless steel containing 18 percent chromium and 8 percent nickel. This proved more resistant to corrosion and scale formation than the carbon-steel stacks, but had a tendency to become brittle at constant exposure to high temperatures. The next step was the addition of a stabilizing element, such as titanium, which prevents this embrittlement. All stacks on present contract are manufactured from this material. Recently, a nickel alloy containing 14 percent chromium and 10 percent iron has been developed, known as INCONEL, which is also free from embrittlement and apparently has properties superior to the stainless steel. Several short stacks manufactured from INCONEL are on service test. The appearance of these stacks after 150 hours' service is

quite superior to the stainless steel stacks. Coatings for exhaust stacks have been tried but were not very satisfactory except for a short period of service. Eventually these coatings scale or change color.

New Steel Jig for Static Test.

A heavy steel jig has been installed in the Static Test Laboratory to replace the old wooden jig structure that has been used during past years. The weight of the new jig and its auxiliary members is fifty-two tons, and it is supported on a 228-ton base of reinforced concrete and steel.

Several distinct advantages will result from the use of this new equipment. A finer accuracy in the test readings will be assured. Separate parts of the airplane structure can be fastened rigidly to the jig, and thus deflections of that part only will be obtained. In the static testing of a complete airplane, deflections of the various parts are certain to influence each other. The cost of static test and research work will be reduced considerably since, on some designs at least, it will be necessary to test only certain critical sections before going to the expense of building a complete structure with the airplane still in the experimental stage. During fabrication of the first article it will solve many difficult problems and will enable much more rapid development of the type. A great deal of the time spent at present in correcting structural troubles occurring in the first article and in the succeeding service articles can be eliminated. The first use of the new jig will be made in testing a large wing panel, the B-9A, from a research viewpoint.

Another interesting feature of the Static Test Laboratory may be pointed out. In the floor of the building there are one hundred and sixty-six T-slotted cast-steel hold-down fittings, each designed for a reaction of 15,000 pounds. These fittings will carry the test reactions into the floor and will eliminate much work in testing, since counterbalance loads will not have to be provided. To keep dirt from collecting in these slots when they are not in use, covers have been provided that are flush with the floor.

---oOo---

Air Corps

NEWS LETTER

F. C. BARRY

ISSUED BY
THE OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON

VOL. XVIII

AUG. 1, 1935

NO. 14

THE UNIVERSITY OF CHICAGO

LIBRARY

1915

1915

1915

1915

The Chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oCo---

AIR NAVIGATION INSTRUCTION IN THE TACTICAL UNIT

By Captain Norris B. Harbold, Air Corps

Ed. Note: This article was written as a result of the experience gained by Captain Harbold at the Advanced Air Navigation Training Units at Langley and Rockwell Fields. The views set forth, although concurred in by the officers directly concerned in the conduct of the Navigation Training at Rockwell Field, represent purely the personal ideas of the author and do not constitute an official report.

The mention of the word "navigation" conjures in the mind of the normal pilot visions of intricate and complicated instruments, theories, methods and procedure. Particularly is celestial navigation visioned as the final and occult method of determining position. The fundamental basis of all navigation, whether it be air, marine or terrestrial, is foregotten and relegated to the limbo of the past. Dead-reckoning, deduced-reckoning, educated guessing, or whatever one wishes to call it, is forgotten.

However, when reminded of dead-reckoning, most pilots will step up boldly and declare in unmistakable firmness that they are competent dead-reckoning navigators. They have flown over the whole United States with the greatest of ease. Some will even state that they have never been lost. The latter statement will classify the individual as a phenomenon or one given to exaggeration. Granting that there do exist a few phenomena, we are still left with a lot of glib-tongued individuals with highly colored imaginations.

Moreover, as a result of close association with the Advanced Air Navigation Training conducted at both Langley and Rockwell Fields in the training of some 100 pilots, we are obliged to disagree with those who have considered themselves dead reckoning navigators and ascribe their success, if any, to a spurious form of pilotage, a minimum of dead-reckoning and considerable good luck.

Of what does Dead Reckoning consist? Let us consider the various items in detail which we should have available and which we should be able to use intelligently. Also, let us try in all our work to reduce those possible errors, which we know are probable and which we can ascertain and tabulate, to the barest minimum.

First, let us consider our maps and

hydrographic charts. A prospective navigator should understand the basic differences between the four generally used types of projection, namely, the Lambert Conformal, Mercator, Gnomonic (Great Circle) and Polyconic. He should know when to use each type of map and how to use it. He should know how to draw and measure courses, pick off latitude and longitude, measure distances and determine mean variation on each type of map. With this information our embryo navigator is prepared to use intelligently what is available and prescribe what changes or improvements he thinks necessary, not before. He is also prepared for the next step in his training.

We now consider the airplane and its equipment, and we are confronted with what is probably the most important instrument which, for many reasons, has become known as a "screw compass."

Our prospective navigator begins to lose this prejudiced concept as he begins to learn more about this instrument. He is taught the basic principles upon which the various types of compasses are constructed. He learns the sources of compass errors, namely, variation, deviation, and lubber line error; and how these errors are corrected or accounted for, but most important, he learns how much these errors can be reduced. The proper installation of the compass is learned, and the proper method of compass compensation. With this information, our prospective navigator is competent to check the installation, compensate and use his compass confidently. He may now be qualified to recommend changes or improvements in existing equipment, but certainly not before.

In the air we are supported in a medium which has no relationship to the ground on which our point of departure and destination are located. However, with the knowledge the navigator has acquired, together with instruction on the effect of wind upon aircraft in flight he can

V-6827, A.C.

intelligently deduce his drift correction and ground speed and then check and correct that deduction by pilotage. To avoid rash deductions (or guesses, whatever you like) and to avoid forgetting deductions, our navigator is required to keep a brief log of the flight, on which he keeps a running record of drift corrections and subsequently compass headings, ground speeds and his estimated time of arrival (ETA) at his destination. This is most important.

With the knowledge he has now acquired, our prospective navigator is competent to proceed upon missions in which he can use dead reckoning combined with pilotage with hopes of success. It does not appear too difficult so far, we hope.

At this stage of instruction our navigator will have become acquainted with the fact that reported winds (found by soundings) are seldom of value except directly above the station from which the soundings were made. If he has had occasion to fly over territory where landmarks are few, or over water, he has undoubtedly found that his deductions as to drift correction and ground speed were too faulty to be of material value, and he clamors for help.

Help is forthcoming in the form of various instruments and equipment which are usually classed generally as "gadgets."

To answer the problem of determining drift correction we find that the Air Corps has been the proud possessor, for years, mind you, of several instruments which, by later experiment, were found highly satisfactory under various conditions, though naturally, not the last word. We find these instruments listed under the name Meter Assembly, Drift, Type A-3, Type D-1A. Our navigator experiments therewith and determines for himself the efficiency of these instruments. Over land he finds that all of them will be of material aid at all altitudes under most conditions of light and terrain. Over water he finds that some of them will work as high as 3,000 feet with good light and a broken surface. He also finds that none of them work at night, although some success is had at low altitudes with a spot light. Apparently his problem of determining drift correction is solved to a great extent, and so it is. However, he still does not know what to do about ground speed.

Instruction follows quickly, enabling the solution of this problem. He finds that there are three general methods of determining ground speed: 1. By manual timing of the passage of an object between two grid lines; 2. By the automatic timing by a mechanical gadget, and 3. By solving a wind star using several drift readings.

In the first method, manual timing is found to be inconsistent because of personal error. In the first two methods he finds that accurate altitude is required; in the third method he finds that accurate airspeed is required. A constant indication of accurate altitude, quite apparently, is next to impossible as we have to know the exact altitude of flight and the exact altitude of the terrain over which we are flying. This seems to make the first two methods difficult, to say the least, and so they are.

In the third method, requiring accurate airspeed, he finds that the airspeed meter which most of us have consulted sheepishly, perhaps, (instead of gliding with that old feel of the airplane coming up through the pants) is rated as one of our most accurate instruments. This instrument, however, must be carefully calibrated to determine installation error and corrected for temperature and altitude. The procedure in calibration is soon determined. All corrections for temperature, altitude and calibration are accomplished by another small gadget (Mark V or VC-1 Computer) in one operation.

Instruction then continues with the Double Drift Method which entails taking two Drift Readings on headings of 45°, respectively, to the original Compass Heading. Then with the True Airspeed, he finds ground speed from a Table, a really simple operation which requires, at the most, two minutes. Such calculations as he finds necessary in finding ground speed and ETA he accomplishes with another interesting gadget known as Type A-1 Dead-Reckoning Computer.

So we find our navigator practicing with his instruments and arriving at his destinations with commendable accuracy, both in direction and ETA. Another step is accomplished and he comes back for more.

Imagine his astonishment when he finds that he is now a D.R. Navigator. But what of pilotage, radio and celestial navigation he will ask, and so will most pilots.

Explanation follows. Pilotage, which includes bearings on recognized objects, Radio Navigation and Celestial Navigation are AIDS to navigation only. Dead-Reckoning is the basis of all navigation. All Marine Navigation, whether it be practiced by the skipper of the "Rex" or "Normandie, or our brothers in arms, the Navy, is based on Dead Reckoning. Granted that improvement in equipment and knowledge of ocean currents has practically reduced the reckoning to knowledge, we still find, sometimes, that the aids fall down and so does the dead reckoning, and vessels go aground. In most cases, however, it will be found that too much dependence was placed upon the aids and not enough upon the basic D.R. Nor are airplanes exempt. How many have landed in cow pastures or crashed because pilotage (visibility) and radio failed?

Operations personnel in Wings, Groups, V-6827, A.C.

Squadrons and Flights are sometimes apt to consider this really simple training as the subject for a special school. It seems that Instrument Flying was considered specialized not long ago; now it is in the Squadron. Why not Navigation?

We now have, as stated before, approximately 100 pilots who have been exposed to this so called Advanced Air Navigation Training. Let us use them. They can be Operations, or Armament, or Engineering or Supply, but let us tag them again - Navigation Officer. Let them be responsible for the accumulation and dissemination of available equipment and information. Let us establish a chain of Navigation Officers. When a Squadron Navigation Officer becomes stumped, he can appeal to the Group, he to the Wing and so on up, so that new equipment and information can find its way down to the lowly wing man through those really interested in navigation.

In the matter of training, Operations are also wont to express firm opinions as to the lack of time, but consulting our training directive we find sixty flying hours allotted to W-2, Air Navigation. Why not use it for Navigation? So, when our wing man, after some ground instruction, which with our present dearth of flying equipment should not be difficult, acquires a little information and interest and submits a cross-country request, it is approved. However, his route and preparation are checked (not always, but just to make sure it is not haphazard) and he is required to submit a complete log of the flight.

If in a single-seater or two-seater, where pilot is also navigator, he may elect to follow a radio beam for some distance. This is all well and good and is noted on the Log. However, not all W-2 should be on a beam. If a multi-seater is used, the pilot is required to take an additional pilot; one acts as navigator while the other pilots, but in any case a complete and detailed Log is required.

At another field, gunnery and bombing are being stressed. Navigation training is hanging on the edge. But wait! Our new navigation officer has a bright idea. The bombing or M.G. range selected is some distance from the home station. By a roundabout method it can be approached without flying over the inhabited country. The Navigation Officer, therefore, suggests to load up at the home station, navigate to the target and bomb. The recommendation is accepted and two phases of training are combined. Everyone is content.

Let us, therefore, not forget or neglect the important aids to Navigation. Pilotage and Radio should be used continually, but used in their correct relationships - as aids. Likewise, celestial navigation is important; not so much at the present time, but as the range of aircraft increases, celestial navigation is becoming a more important aid. Let us, therefore, as the motto of one of our automobile manufacturers so aptly states - keep an eye to the future, but an ear to the ground - and so we may never forget the possibilities of DEAD RECKONING.

---oOo---

BARKSDALE FIELD PARTICIPATES IN SHREVEPORT'S CENTENNIAL EXPOSITION

Crowds lined along a two-mile route in the Shreveport, La., business district on Saturday morning, June 30th, to witness the gigantic military parade, feature of the Centennial Exposition sponsored by the City of Shreveport and to view the floats significant of the progress of aviation, prepared and built by Barksdale Field.

Headed by a police motorcade, the two-mile long parade swung into view at 10:20 a.m., and passed between the thronged lines of spectators, who officials and old-timers say formed one of the largest parade crowds in the history of Shreveport.

First came the Beaumont American Legion Drum and Bugle Corps; Governor O.K. Allen and his staff; Colonel G.C. Brant, Commanding Officer of Barksdale Field, and his staff; a series of seven military floats, and squadrons of uniformed men representing the respective organizations of Barksdale Field.

The Barksdale Field floats were led by "Wings of a Century," with Miss Marilyn Lovell as the "Goddess of

Aviation." Next in order were the "Wings of Yesterday," bearing a model of the first airplane; "Wings of the World War"; "Wings of the Lone Eagle," showing a replica of Lindbergh's "Spirit of St. Louis," suspended between a miniature New York skyscraper and the Parisian Eiffel Tower; "Wings of Progress," contrasting the ox cart transportation of 1835 with today's streamlined aviation; "Wings of Tomorrow," in which aviators hazard a guess on future airplane construction; and "Wings of Barksdale," symbolizing the spirit of the world's largest airport.

---oOo---

Machine gun practice is strictly aerial at Hamilton Field these days. While one fast Martin Bomber pulls a tow target through the air at the rate of 200 miles per hour, another equally fast Bomber peppers it with its machine guns. Thus, the pilots of the 7th Bombardment Group are acquiring practice in the air at a moving object which is speeding at the rate of an average airplane.

V-6827, A.C.

COLLIER TROPHY PRESENTED TO CAPTAIN HEGENBERGER

For his solo blind landing, his preparatory work in connection with instrument flying over a period of 15 years, and his subsequent contribution to the advancement of aviation in perfecting the instrument landing system of the Army Air Corps, Captain Albert F. Hegenberger, Air Corps, was awarded the Collier Trophy on July 22nd at the White House at the hands of the President.

President Roosevelt said he followed Captain Hegenberger's career with interest and praised the Air Corps officer's contribution to American flying knowledge.

Among those who witnessed the presentation were Second Assistant Postmaster General Harllee Branch; Brigadier-Gen. Oscar Westover, Assistant Chief of the Air Corps; Major James H. Doolittle; Col. Edgar S. Gorrell, Chief of Staff of the Army Air Service in France during the War and Chairman of the Committee on Awards, and officers of the Army and officials of the Bureau of Air Commerce.

The twentieth award of this Trophy, made annually by the National Aeronautic Association for the greatest achievement in aviation in America, the value of which has been thoroughly demonstrated by actual use during the preceding year, was accompanied by the following citation:

"To Captain Albert F. Hegenberger, United States Army Air Corps, for the development and demonstration of a successful blind landing system.

This blind landing system, first demonstrated by Captain Hegenberger on May 9, 1932, in the world's first solo flight, alone in the plane and depending solely upon instruments from take off to landing, reached complete development and was put into actual use in 1934. It overcomes one of flying's greatest hazards.

Adopted not only by the Army Air Corps but also by the Bureau of Air Commerce, Department of Commerce, it has been accepted as the most practical system developed to date for either military or commercial purposes."

Captain Hegenberger, one of the best versed pilots in the Air Corps in the art of aerial navigation, has rendered distinguished service to his branch and to aeronautics in general. For the memorable first flight over the Pacific from Oakland, Calif., to Honolulu, Hawaii, in June, 1927, in an Army Transport plane, covering a distance of over 2400 miles, when Captain Hegenberger shared the piloting of the plane with Captain Lester J. Maitland, and also acted as navigator, both officers were awarded the Distinguished Flying Cross as well as the Mackay Trophy, the latter given annually for the most outstanding flight of the year by an Army pilot or pilots.

During the greater part of his service in the Air Corps, Captain Hegenberger has devoted himself to the science of aerial navigation. He has the distinction of

being the first Army pilot to fly alone in an airplane with a covered cockpit which excluded all outside vision.

This successful flight was the seventh in a series of nine attempts. During the first three flights, observers were carried in the plane who knew nothing of flying. On the seventh flight, Captain Hegenberger took off alone, made two 180-degree turns and landed at the take-off point. He used radio to guide him into the field, to mark for him the point at which to begin his glide and to warn him when he neared the field boundary. He employed a super-sensitive altimeter to indicate his altitude above the landing area. Other aids to flight utilized included artificial horizon, gyro compass, radio compass and standard flight instruments.

On the ground were three radio sets. Sitting in the cockpit which had a shielded cover, cutting off all view outside the plane, he first tuned in on a transmitter distant from the field to simulate cross-country flying. After executing the first 180-degree turn, he tuned in first on a portable transmitter placed 1,000 feet from the border of the field and then on another a mile and a half away. Although flying away from the field, he was able, by lining up the two radio transmitters, to ascertain the correct flight path on which to return for his landing. Executing his second 180-degree turn at a height of 1,000 feet, he began gliding down as he headed for the mile-and-a-half station.

Captain Hegenberger has instructed many Air Corps pilots in the art of flying by instruments alone and, as a result of his energetic efforts in this line of endeavor, instrument flying is now being carried on at every Air Corps flying field.

His most valuable contribution along the line of promoting safety in flight under unfavorable flying conditions was recognized by the War Department, when he was awarded the Oak Leaf Cluster to the Distinguished Flying Cross.

The airworthiness of the Army's instrument landing system as developed by Captain Hegenberger received the hearty indorsement of the Bureau of Air Commerce, Department of Commerce, at the beginning of this year when, after painstaking tests, that governmental agency adopted this system in its entirety.

Captain Hegenberger was born in Boston, Mass., September 30, 1895. He attended the Boston Elementary Schools, the Mechanics Art School, and pursued a course in civil engineering at the Massachusetts Institute of Technology for three years.

On September 8, 1917, he enlisted in the Aviation Section, Signal Corps, receiving his aviation ground school training at the Massachusetts Institute of Technology and his flying training at Ellington Field, V-6827, A.C.

Houston, Texas. He passed his tests as a Reserve Military Aviator on April 6, 1918, and was commissioned on that date as a second lieutenant.

After brief periods of duty at Ellington Field and at Camp Dick, Dallas, Texas, he was assigned to the School for Aerial Observers at Post Field, Fort Sill, Okla., and subsequently to the Aerial Gunnery School at Taliaferro Field, Hicks, Texas. He graduated as a gunnery pilot on July 5, 1918.

Again Captain Hegenberger found himself back at his old School, the Massachusetts Institute of Technology, this time to pursue a four months' course in engineering, following the completion of which he was assigned to duty in the Equipment Section of the Engineering Division of the Air Corps at McCook Field, Dayton, Ohio. He was Chief of the Instrument and Navigation Branch of the Engineering Division from July, 1919, to September, 1923, when he was ordered to duty in the Hawaiian Department, where he served as Operations Officer of the 72nd Bombardment Squadron and Group Operations Officer of the 5th Composite Group. Upon the expiration of his tour of duty in Hawaii, he returned to duty at McCook Field.

During his stay at this field, and later at Wright Field, to which all Air Corps engineering activities were transferred in 1927, Captain Hegenberger made a number of long-distance flights through fogs or above the clouds, relying on the earth inductor compass to guide him to his destination.

Almost twelve years ago, on September 6, 1923, Captain Hegenberger flew the greater part of the journey from Dayton to Boston completely out of sight of land. Of course, there were no hooded cockpits in those days but, so far as vision of the ground was concerned, the pilot and his passenger, Mr. Bradley Jones, then Navigation Engineer at McCook Field, were not much better off than the present day airman piloting a covered wagon, aerial type.

Despite unfavorable weather conditions, they took off from McCook Field in a DeHaviland plane at ten o'clock and landed at the Boston Airport seven hours and 25 minutes later. The sky was obscured by clouds which stretched from 300 to 7,000 feet altitude. After sighting the Ohio State University at Columbus, the clouds became so dense that the flyers climbed above them and found themselves in clear sunlight a little above 10,000 feet. A solid layer of clouds stretched beneath them. Not a glimpse of a land mark was obtained for a number of hours. The entire State of Pennsylvania was passed over without their obtaining a glimpse of it. Flying by instruments alone, Captain Hegenberger at about 3:40 p.m., estimated that he should be close to the Hudson River, so

he descended through the clouds and crossed this body of water not five minutes later. The remainder of the journey to Boston was made under the clouds. The successful termination of this flight demonstrated the efficiency of air navigation instruments even in those early days of Army aviation.

The various navigation flights conducted by Captain Hegenberger aided in a great measure in the development of the earth inductor compass, the instrument on which Colonel Lindbergh relied on mainly during his memorable New York to Paris flight in 1927.

Captain Hegenberger completed a navigational course at the U.S. Naval Air Station at Pensacola, Fla., and he is generally considered one of the best navigation and instrument officers in the service.

---oOo---

FAST FLYING ACROSS THE CONTINENT

In a long flight, directed by the Commander of the First Wing, to test GHQ equipment, Lieut.-Colonel Clarence L. Tinker, Commanding Officer of the 7th Bombardment Group, Hamilton Field, Calif., flew from that field to Washington, D.C., on July 4th, in 14 hours and 40 minutes. This flight was made via Salt Lake City, Omaha, Neb., and Indianapolis, Ind., with stops at all of these points.

On the return flight, Col. Tinker winged his way from Bolling Field to Hamilton Field in his Bomber, the "Bird O'Prey," on July 9th, in 16 hours and 55 minutes, intermediate stops being made at Indianapolis, Scott Field, Denver and Salt Lake City.

Accompanying Col. Tinker on this flight were Captain Donald J. Keirn, 2nd Lieut. Nathan F. Searles, Air Reserve, and Technical Sergeant Peder Berg, Crew Chief.

---oOo---

CHANGE IN COMMANDERS AT FRANCE FIELD

Lieut.-Colonel Lewis H. Brereton, Air Corps, Commanding Officer of France Field, Panama Canal Zone, for the past three and one-half years, recently departed for the United States via Pan-American Airways. Col. Brereton has been assigned to the Command and General Staff School, Fort Leavenworth, Kansas, for duty as instructor, and will report at this school the latter part of August.

Lieut.-Colonel Junius H. Houghton, Air Corps, assumed command of France Field on June 20, 1935.

---oOo---

During the month of June, the Engineering Department of the San Antonio Air Depot, Duncan Field, Texas, overhauled a total of 24 airplanes and 52 engines and repaired a total of 24 airplanes and 37 engines.

DIVERSIFIED GROUP OF FLYING CADETS REPORT AT LANGLEY FIELD

Twenty students (19 Bombardment and one Pursuit) members of the class which graduated from the Air Corps Training Center on June 22nd last, reported for active duty at Langley Field, Va., on July 1st.

"As is the rule with cadets," says the Langley Field Correspondent, "they are a representative and diversified group. Educationally, they range from Ph.D. down, and physically from six feet five to five feet six. Twelve States are represented, California leading with five men. Professionally, they range from globe trotter to artist, but the largest number are engineers, several in the aeronautical field.

---oOo---

Among these new acquisitions are 'Skipper' Adair, South Carolina's contribution to this season's Langley Field Football Team; 'Clancy' Schmid, with two round-the-world and several shorter ocean cruises to his credit; Emil Scott, holder of several Texas State pole vault records in 1932; 'Ace' Williamson, a successful production engineer for Caterpillar Tractor before enrolling at Randolph, and 'Benn Gunn' Pearson, whose altitude of six feet five inches speaks for itself. The remaining members of the group also have their claims for fame, but the above will serve as a cross section of the diversified character of these recently graduated airplane pilots."

FORMER KELLY FIELD PRIVATE BECOMES COUNTY COURT JUDGE

While a member of the Headquarters Squadron of the Air Corps Advanced Flying School at Kelly Field, Texas, Private William L. Scarborough, 6225683, spent his spare time attending the San Antonio Public School of Law. He was graduated near the head of his class and was admitted to the Texas Bar and licensed to practice in the Federal Courts.

Shortly after this, he was discharged per expiration of term of service, on September 2, 1934, and became the junior member of the legal firm of

Houtz and Scarborough at Sinton, Texas. Hon. James V. Allred, the Governor of Texas, recently appointed him a special judge, one of the first assignments being to serve on the County Court bench, San Patricio County.

The rapid rise of this individual from a private in the Air Corps to a civil judgeship is an excellent illustration of what application and energy can accomplish, and should serve as an incentive and as an inspiration to others who aspire to improve their present standing.

---oOo---

ACTIVITIES OF THE 20TH BOMBARDMENT SQUADRON

The operations of the 20th Bombardment Squadron of late have been of an unusual type. Major Barney M. Giles, Air Corps, arrived from the Air Corps Tactical School on May 31st, and assumed command of the Squadron. On June 11th, the Squadron flew to Mitchel Field with the 2nd Bombardment Group for the purpose of training West Point cadets, during the period June 15th to July 5th. Sixteen pilots and thirty-six enlisted men made the trip, and since the Squadron had only 8 B-6A's and one PT-3, twelve members of the organization drove their automobiles. All personnel reported an enjoyable time.

While at Mitchel Field, 2nd Lieuts. Insman, Dilley and Murphy, Air Reserve, and Flying Cadets Cunningham and Gresham flew by transport to Langley Field. The Reserve Officers were to revert to

inactive status for one day and then report for additional active duty, and the Cadets to receive their commissions as second lieutenants in the Air Reserve and report for one year's active duty. They returned to Mitchel Field on July 2nd.

LIEUT. NELSON JOINS UNITED AIR LINES CORP.

The 11th Bombardment Squadron, Hamilton Field, lost a valuable officer as 2nd Lt. Orvis M. Nelson, Air Reserve, took off for Chicago to accept a position as co-pilot with the United Air Lines Corporation. Lt. Nelson served as the Squadron School Officer and Asst. Operations Officer. He also functioned as the Photographic Officer for the 7th Bombardment Group at Hamilton Field. He regularly flew a mail run while the Air Corps carried the mail in 1934. In April, 1935, Lt. Nelson, accompanied by 1st Lt. Aubrey K. Dodson, brought honor to the 11th Bombardment Squadron and the Air Corps by performing an errand of mercy when he flew over San Pablo Bay, located a fleet of Sea Scouts thought to be in possession of poisoned food, dropped messages of warning, and so saved them from possible death or serious illness.

Effective July 27, 1935, Major William B. Wright, Air Corps, was assigned to duty as Air Officer on the staff of the Commanding General, 5th Corps Area, Fort Hayes, Columbus, Ohio, with the temporary rank of Lieut.-Colonel during the period of such assignment.

ASSIGNMENT TO STATIONS OF NEWLY COMMISSIONED AIR CORPS OFFICERS

The 40 ~~enly~~ men and two Reserve Officers of the Air Corps, who were recently selected for appointment as commissioned officers in the Air Corps, Regular Army, as a result of the examination conducted in the United States and foreign possessions, April 2-8, 1935, and for which approximately 475 candidates competed, were, under Special Orders of the War Department recently issued, commissioned second lieutenants, with rank from June 30, 1935, and assigned to various Air Corps stations, as follows:

Air Corps Reserve Officers

Daniel E. Hooks to Air Corps Training Center, Randolph Field, Texas.
Raymond P. Todd to Selfridge Field, Mich.

Privates, Air Corps *

To Air Corps Training Center, Randolph Field:

Harry N. Renshaw, Barksdale Field, La.
Bob Arnold, Barksdale Field, La.
John D. Pitman, Barksdale Field, La. (1)
Marvin F. Stalder, Rockwell Field, Calif.
Eyvind Holtermann, Crissy Field, Calif.
Donald N. Wackwitz, Brooks Field, Texas.
Randolph L. Wood, Langley Field, Va. (2)
George H. Macintyre, Crissy Field, Calif.
Mell M. Stephenson, Jr., Maxwell Field, Ala.
Robert S. Fisher, Brooks Field, Texas.
Clarence M. Sartain, Brooks Field, Texas.

To Fort Leavenworth, Kansas:

Lawrence S. Fulwider, Scott Field, Ill.

To Bolling Field, Anacostia, D.C.

Dolf E. Muehleisen, Rockwell Field, Calif.

For duty with General Headquarters Air Force.

To Mitchel Field, Long Island, N.Y.:

Ray W. Clifton, Maxwell Field, Ala. (3)

Thomas F. Langben, Barksdale Field, La.

To March Field, Riverside, Calif.:

Harry Crutcher, Jr., Randolph Field, Texas.

Clair L. Wood, Crissy Field, Calif.

Carl Swyter, Fort Lewis, Wash.

Jasper N. Bell, Crissy Field, Calif.

Joseph C. Moore, Kelly Field, Texas.

To Hamilton Field, San Rafael, Calif.:

Robert E. Jarmon, Crissy Field, Calif.

To Barksdale Field, Shreveport, La.

Noel F. Parrish, Patterson Field, Ohio

Jack M. Malone, Brooks Field, Texas.

Edward M. Gavin, Maxwell Field, Ala.

Charles H. Leitner, Jr., Maxwell Field, Ala.

James H. Price, Maxwell Field, Ala.

James H.C. Houston, Langley Field, Va.

Frank N. Moyers, March Field, Calif.

To Langley Field, Hampton, Va.:

Joseph B. Stanley, Mitchel Field, N.Y.

Russell L. Waldron, Maxwell Field, Ala.

William F. Day, Jr., Mitchel Field, N.Y.

Richard C. Weller, Mitchel Field, N.Y.

Charles B. Harvin, Bolling Field, D.C.

Burton W. Armstrong, Jr., Bolling Field, D.C.

Erickson S. Nichols, Mitchel Field, N.Y.

Harry Coursey, Middletown, Pa. Air Depot.

To Selfridge Field, Mt. Clemens, Mich.:

Arnold T. Johnson, Scott Field, Ill. (1)

Edward S. Allee, Langley Field, Va.

Lester S. Harris, March Field, Calif.

Harold L. Neely, Langley Field, Va.

NOTE:

* Except as noted.

(1) Corporal

(2) Sergeant (First Class)

(3) Staff Sergeant

---oOo---

TEMPORARY PROMOTION OF CHANUTE FIELD OFFICERS.

Effective July 24, 1935, the following-named officers of the Air Corps, stationed at Chanut Field, Rantoul, Ill., were assigned to the duties indicated, and with temporary rank during the period of such assignments, as follows:

To Captain

1st Lieut. Donald W. Norwood, Director, Clerical, Air Corps Technical School.

1st Lieut. Benjamin T. Starkey, Operations Officer.

1st Lieut. George R. Bienfang, Intelligence and Operations Officer, 48th Pursuit Squadron.

1st Lieut. Albert Boyd, Flight Commander, 48th Pursuit Squadron.

1st Lieut. Forrest G. Allen, Flight Commander, 48th Pursuit Squadron.

To First Lieutenant

2nd Lieut. Charles W. Haas, Meteorological Officer.

2nd Lieut. Gordon A. Blake, Communications Officer.

---oOo---

AIR CORPS OFFICERS DETAILED TO M.I.T.

The following-named Air Corps officers were, under Special Orders of the War Department recently issued, detailed as students, under the provisions of Section 127a, National Defense Act, as amended, to take a course of instruction at the Massachusetts Institute of Technology, Cambridge, Mass.:

1st Lieut. Anthony Q. Mustoe, Engineering Officer, 39th Observation Squadron (Corps and Army), Kelly Field, Texas.

1st Lieut. Floyd B. Wood, Middletown Air Depot, Middletown, Pa.

1st Lieut. Royden E. Beebe, Jr., Engineer Officer, 97th Observation Squadron (Corps and Army), Mitchel Field, N.Y.

1st Lieut. Torgils G. Wold, station complement, Selfridge Field, Mich.

Lieuts. Mustoe, Wold and Beebe are relieved from temporary rank, effective June 7th, 8th and 9th, respectively.

---oOo---

Technical Sergeant John T. Dee, 61st Squadron, Mitchel Field, N.Y., was placed on the retired list June 30, 1935.

GENERAL FIELD EXERCISE NO. 8
IN CONJUNCTION WITH FIELD ARTILLERY SCHOOL
By Sergeant R. E. Ingmundson

On Monday, June 24th, the First Balloon Squadron, Air Corps, left Post Field, Fort Sill, Okla., for participation in General Field Exercise No. 8. Two Air Corps officers, Major Ira R. Koenig and Captain W.C. Farnum, and a total of 82 enlisted men were taken to the field.

The truck column consisted of two station wagons, two winches, three $\frac{1}{2}$ -ton pick-ups, four $1\frac{1}{2}$ -ton cargo and two $2\frac{1}{2}$ -ton cargo trucks. A minimum of tentage was carried, due to the fact that the whole maneuver was carried out insofar as possible with a view to maximum concealment of the encampment from hostile aircraft. The men bivouacked.

The organization left Post Field at 6:00 a.m., and maneuvered the balloon cross-country to a position between Signal Mountain and West Lake in the Fort Sill Military Reservation, going into concealment there and flying the balloon until 3:00 p.m. that day. Flying conditions were good at the start, but along towards noon the wind started increasing in velocity until at 3:00 p.m., when the organization broke concealment and commenced its maneuver to Cow Creek, Wichita National Forest and Game Preserve, the wind was very gusty, with velocities running up to 45 and 50 miles per hour.

Due to the fact that several "jumps" had to be made before arriving at Cow Creek, it was necessary to fly the balloon from the transportation cable at an altitude of 300 feet. The gusty winds, coupled with the fact that the maneuver was made through hilly country with its corresponding tricky "bumps," made this maneuver exceptionally hard on the men and the balloon. The balloon had a decided tendency to dive. After leaving Purington Gate, the balloon made two bad dives, almost reaching the ground before straightening up again. On the second of these dives, it crabbed so far off-wind that the basket became entangled in the rigging, and when the subsequent jerk came in straightening it up, a whole section of rigging on the right rear metallic vee tore out, pulling and breaking battonets from the rigging band and severing many first and second bridles. It is the general consensus of opinion in the squadron that we were mighty lucky to get the balloon bedded down at Cow Creek because, due to the breakage of so much of the rigging, we expected at any minute to have to break convoy and chase one each free "captive balloon."

Luck was with us, and at 5:55 p.m., we pulled into Cow Creek and bedded the balloon down and prepared camp. The damage to the rigging was speedily repaired by the rigging crew before dark and the balloon was ready to fly the following morning.

It was found by the rigging crew that seven upper first bridles, five lower first bridles and eleven second bridles had become broken in our first day's maneuver. Most of this rigging was the attachment to the rear metallic vee.

Tuesday, June 25th, we remained in bivouac at the Cow Creek encampment all day. The balloon was flown at various times during the day, making observations and reports of friendly and hostile activities. The men made good use of nearby lakes on Cow and Panther Creeks during our stay at Cow Creek, several of them coming up with blistered backs, not to mention numerous "chigger" bites.

Wednesday, June 26th, we put the balloon in the air at daybreak, but were forced to bed it down shortly due to rapidly approaching bad weather, which delayed our scheduled move from the encampment from 9:45 a.m. until 12:00 noon. Towards noon the weather cleared rapidly and the wind subsided, so we broke camp and proceeded to maneuver the balloon to a position one mile west of Purington Gate, going into concealment there at about 1:30 p.m. The balloon was flown from that position until 4:00 p.m., with observations being made on the "Blue" advance and the "Red" retreat. At 4:00 p.m., we maneuvered the balloon through Purington Gate and to a position between West Lake and Signal Mountain (the same position occupied Monday morning) where the organization bivouacked for the night. We flew until dark this day and observed fire for the 1st Battalion, 2nd Field Artillery. Very interesting work - we should do more of that kind.

Thursday, June 27th, we put the balloon up at daybreak, flying from our Signal Mountain position until 9:30 a.m., when we broke camp and maneuvered the balloon to a position adjacent to Four-Mile Crossing, where it was flown until 7:00 p.m., making observations. The balloon was then maneuvered back into Post Field for the night.

Friday, June 28th, we were scheduled to observe actual firing in the South Arbuckle Range, from day-break until about 9:00 a.m. (the completion of the problem), but due to rain, high winds and no ceiling, were unable to complete this morning's portion of the problem.

This is the fifth problem of this nature that this organization has participated in since its arrival at this station in 1929, and we encountered the worst flying weather for the elapsed time of the problem that we ever had to contend with, but at the same time completed more pilot hours than any other problem we participated in, completing 24:45 pilot time, with 14:50 ballast maneuvering time, for a total of 39:35 balloon time for the

problem.

Among humorous events in connection with the problem was the extreme lack of appreciation by the various Field Artillery units of our bugler sounding off first call at 4:00 a.m. Thursday morning at Signal Mountain, as evidenced by many sarcastic comments. Also, the old balloon war-cry of "how you hear me now" reverberated during all phases of the problem.

---oOo---

UNFORTUNATE AIRPLANE ACCIDENT IN PANAMA

Death claimed the lives of two France Field flyers late Wednesday afternoon, July 3, 1935. First Lieut. Winton S. Graham and 2nd Lieut. George R. McMahon had flown to Rio Hato, Republic of Panama, some eighty miles from France Field, that afternoon in an O-19C observation plane and were returning to France Field, when for some unknown reason they were forced down into the Bay of Panama, near Taboga Island. Apparently they were immediately drowned. Lieut. Graham's body was recovered on Friday afternoon, July 5th, with the parachute and life belt still fastened to the body and unused. According to the News Letter Correspondent, the belief prevails that unfavorable weather conditions and an unusually heavy rainfall caused the crash. He stated that up until late Saturday afternoon, July 6th, neither Lieut. McMahon's body nor the airplane had been recovered. The body of Lieut. Graham was found floating in the ocean, showing evidences of severe impact.

Search for the missing flyer and the plane had been constantly maintained by all Army planes on the Isthmus. Several Navy airplanes also assisted in the search.

Lieut. Graham's home was at Big Stone Gap, Va. He graduated from West Point in 1933, and from the Air Corps Advanced Flying School, Kelly Field, Texas, in 1934.

Lieut. McMahon's home was at Huntington, West Va. He was an Air Corps Reserve officer, graduating from the Advanced Flying School in 1934.

---oOo---

FLYING ACTIVITIES AT FRANCE FIELD, PANAMA

Four airplanes from the 7th Observation Squadron and two from the 25th Bombardment Squadron, France Field, Panama Canal Zone, were recently flown on a 200-mile cross-country training mission to Volcan, some 50 miles north of David, Republic of Panama. Originally intended for two days, the flight was extended to three days because of the inclement weather encountered on the return trip. It was necessary to spend the last night in David. On the whole the trip was

very successful and enjoyed by all.

During the fiscal year ending June 30, 1935, ninety percent of the maximum flying requirements were flown by France Field pilots, and everyone completed his minimum flying requirements. The News Letter Correspondent states that, in consideration of the limited aircraft at the field and adverse weather conditions proving a handicap to flying the year round, this is an enviable attainment.

---oOo---

THIRD TRANSPORT SQUADRON ORGANIZED

A new organization is welcomed into the Air Corps, as well as into the San Antonio Air Depot's own circle, in the establishment of the Third Transport Squadron, pursuant to War Department instructions, as an active unit of the Army at that Depot on July 5, 1935. This organization takes the place of the former Third Provisional Transport Squadron, which had been in operation at the Depot as an embryo organization of the Air Transport Service instituted in February, 1933. This organization was commanded successively by Major R.B. Walker, Lts. D.F. Fritch and D.J. Ellinger, with a force of three enlisted pilots for airplane transport duty on detached service at the Depot from other stations.

On the date of the initial organization of the new Squadron, Captain J.P. Richter of the San Antonio Depot was assigned to its command, and the following "veteran" pilots of the transport service on detached service at this Depot were transferred from their former organizations as its first enlisted personnel:

Master Sgt. C.P. Smith from 12th Observation Group Hqrs., Brooks Field, Tex.

Staff Sgt. T.K. Dorsett from 71st Service Squadron, Barksdale Field, La.,

Sergeant A.M. 1st Cl. J.H. Price from 67th Service Squadron, Randolph Field.

On July 11th, Lieuts. J.H. Hicks and D.J. Ellinger, of this Depot, were assigned as Supply Officer and Engineer Officer, respectively, of the new squadron, and seven enlisted men were transferred to it from organizations at Brooks Field, as follows:

Sergeant H.R. Riley from 12th Observation Group Headquarters,

Corporal I.K. Redding from 62nd Service Squadron,

Private 1st Cl., Specialist 3d Cl. F.M. Anthony and Pvt. Specialist 5th Class

N.O. Ward from Station Complement,

Private 1st Cl., Specialist 4th Cl.

R.L. Cole; Pvt., Specialist 5th Cl. Vance Vostel, and Pvt., Specialist 6th Cl. A.L. Wackerle from 12th Observation Squadron.

On July 17th, Pvt. A.M. 1st Cl. John Gebelin, Jr., from the 53rd School Squadron, and Pvt. L.P. Kleinoeder from the 52nd School Squadron, Randolph Field, both airplane pilots, were transferred to the new Squadron. This occasion is also

V-6827, A.C.

noteworthy from the fact that it is the first time in the history of the San Antonio Air Depot that enlisted men were assigned to duty therewith.

During these first few days, of course, the main objective has been to get the unit properly organized and in

smooth running order, and much enthusiasm and esprit de corps on the part of its personnel have made an auspicious beginning toward getting the Third Transport Squadron on its way to the fulfillment of the mission for which it was organized.

---oOo---

RECIPIENTS OF THE COLLIER TROPHY

Elsewhere in this issue of the News Letter is the announcement of the award of the Collier Trophy for the year 1934 to Captain Albert F. Hegenberger, Air Corps, for his development and successful demonstration of the instrument landing system.

This Trophy was given in the year 1911 by the late Robert J. Collier, and since that time it has been awarded annually, except during the years 1917 to 1920, inclusive, to various individuals and organizations who have figured most conspicuously in advancing in a practical way the progress of aviation in America.

Enumerated below are the individuals and organizations who have thus far received the Collier Trophy:

<u>Year</u>	<u>Recipient</u>
1911	Glenn H. Curtiss for hydroaeroplane development.
1912	Glenn H. Curtiss for development and demonstration of the flying boat.
1913	Orville Wright for development and demonstration of the automatic stabilizer.
1914	Elmer A. Sperry for development and demonstration of gyroscopic control.
1915	W. Starling Burgess for development and demonstration of Burgess-Dunne hydroaeroplane.
1916	Elmer A. Sperry for development and demonstration of Sperry Drift Set.
1917)	Not awarded on account of the World War.
1918)	
1919)	
1920)	
1921	Grover C. Loening for development and demonstration of his Aerial Yacht.
1922	Personnel of the U.S. Air Mail Service for their wonderful achievement in completing a year's operation along different routes from coast to coast without a fatal accident.
1923	Pilots and other personnel of the U.S. Mail Service for successfully demonstrating to the world the practicability of night flying in commercial transportation.
1924	U.S. Army Air Service for having accomplished the first aerial flight around the world.
1925	Dr. S. Albert Reed, of New York,

for development of the Reed metal propeller.

1926	Major Edward L. Hoffman, Army Air Corps, for his work in developing the parachute, now universally used.
1927	Charles L. Lawrence for the development of the air-cooled engine.
1928	Aeronautics Branch, Department of Commerce, for their development of civil aeronautics in making better landing fields and landing lights, as well as other safety devices.
1929	National Advisory Committee for Aeronautics for its outstanding achievement in the development of the airplane engine cowling.
1930	Harold F. Pitcairn for his development and application of the autogyro.
1931	Packard Motor Car Company for the Packard Diesel engine.
1932	Glenn L. Martin as the world's most important manufacturer of large military airplanes.
1933	Hamilton Standard Propeller Company, of Hartford, Conn., through its Chief Engineer, Frank Walker Caldwell, for development of the controllable pitch propeller.
1934	Captain Albert F. Hegenberger, Army Air Corps, for his development and demonstration of a successful blind landing system.

---oOo---

CADET MAKES LANDING MINUS PROPELLER

Displaying a cool head and a steady nerve, Flying Cadet F.R. Drake, 55th Pursuit Squadron, cut his switch and chose to ride his ship to a safe landing rather than jump when it threw its propeller at an altitude of 3,000 feet at Barksdale Field, La., on July 19th. Flying a low wing Pursuit plane, model P-26, Cadet Drake was in a formation of six planes. Luckily, the propeller did not strike any of the other ships. His plane dropped sharply, but he righted it and began dipping downward, bringing the craft to a perfect landing.

---oOo---

Because newspaper articles disclosed his identity as a former German pilot in the World War, Corp. Max Mueller, of Hamilton Field, assistant crew chief of Col. Tinkers' Bomber "Bird O'Prey," has received fan mail from all parts of the country.

WEST POINT GRADUATES ASSIGNED TO UNDERGO FLYING TRAINING

A total of 47 members of the class of 277 cadets who graduated from the United States Military on June 12, 1935, were, under recent orders of the War Department, directed to proceed upon the expiration of their graduation leave to Randolph Field, Texas, and report to the Commanding General of the Air Corps Training Center for duty and flying training.

These 47 students, or 17% of the entire graduating class, received commissions in the various branches of the Army, except the Air Corps, as follows: Corps of Engineers, 4; Cavalry, 5; Coast Artillery, 4; Field Artillery, 14; Infantry, 20.

A year of intensive flying training is ahead of these West Point graduates to whom aviation presented a special appeal, i.e., an eight months' primary and basic course at the Primary Flying School at Randolph Field, and a four months' course at the Advanced Flying School at Kelly Field, Texas. Those who succeed in completing the year's course will be given the rating of "Airplane Pilot" and transferred to the Air Corps, while those failing to make the grade will return to the branch of the Army in which they were commissioned upon their graduation from the Military Academy.

It is now 14 years since the policy was inaugurated of assigning West Point graduates to the Air Corps flying schools for training. During the period from 1922 to 1934, inclusive, 801 West Pointers were accepted for flying training, of which number 375 graduated from the Advanced Flying School, or 47%. It would appear from this that slightly less than one-half of the young men mentally and physically qualified to undergo flying training at the Air Corps Training Center are able to complete the course successfully.

The following statistics covering a 13-year period of flying training given to West Point graduates may be of interest:

Year	Total No. of Grad- uates	Assign- ed to Air Corps	Pct.	Number graduating from the Advanced Flying School	Pct.
1922	102	16	15.6	8	50.00
1923	261	51	19.5	25	49.21
1924	406	61	15.0	20	32.78
1925	244	42	17.2	9	21.43
1926	152	18	11.8	7	38.88
1927	203	30	14.7	16	53.33
1928	260	77	29.0	53	68.83
1929	297	110	37.0	41	32.27
1930	235	84	35.7	40	47.62
1931	296	92	31.0	43	46.74
1932	258	68	26.3	38	55.88
1933	346	92	26.6	43	46.74
1934	247	60	24.3	32*	53.33
Total	3307	801	24.2	375	46.82

* Scheduled to graduate October 15, 1935

The West Point graduates who will soon wend their way to Randolph Field to try their hand

at piloting Army airplanes are enumerated below, as follows:

Class Stand- ing	Name	Home
<u>Corps of Engineers</u>		
5	Albert J. Shower	Madison, Wis.
9	Jack W. Hickman	McCook, Neb.
12	Leighton I. Davis	Lyndhurst, N.J.
20	George R. Smith, Jr.	Coronado Beach, Fla.
<u>Coast Artillery</u>		
81	Kenneth I. Curtis	Milwaukee, Wis.
125	James W. Totten	Fort Omaha, Neb.
131	John N. Howell	Margate City, N.J.
145	Pennock H. Wollaston	West Point, N.Y.
<u>Field Artillery</u>		
6	David C. Wallace	Richmond, Va.
35	James V. Wilson	Elwood City, Pa.
51	Robert M. Stillman	Pueblo, Colo.
57	George S. Eckhardt	Viroqua, Wis.
66	Raymond W. Sumi	Nashwauk, Minn.
74	Sanford W. Horstman	St. John, Kans.
76	David G. Presnell	Atlanta, Ga.
93	Kenneth P. Bergquist	Crookston, Minn.
100	Arthur A. Fickel	Fort Sam Houston, Texas
104	Downs E. Ingram	McElhattan, Pa.
106	Edgar A. Clarke	Kansas City, Mo.
113	Elmer J. Gibson	Shenandoah, Pa.
115	James H. Walsh	Carbondale, Pa.
116	Walter J. Bryde	Newburgh, N.Y.
<u>Cavalry</u>		
58	Richard E. Ellsworth	Erie, Pa.
136	Thomas Wildes	Brooklyn, N.Y.
149	Wilhelm C. Freudenthal	Worcester, Mass.
220	Albert A. Matyas	Brooklyn, N.Y.
229	Pelham D. Glassford, Jr.	Washington, D.C.
<u>Infantry</u>		
86	Joseph G. Russell	Fort Worth, Texas
138	Aaron W. Tyer	Natchez, Miss.
147	Carl T. Isham	Redlands, Calif.
175	Noel M. Cox	Canton, Miss.
182	Charles J. Daly	Pacific Grove, Calif.
183	Samuel C. Mitchell	Westerleigh, N.Y.
188	Lamont Sexton	Lynchburg, Va.
192	John Williamson	Brooklyn, N.Y.
201	Orin H. Moore	Winchester, Tenn.
204	Harvey Bower	Osborn, Ohio
208	Thomas C. Musgrave, Jr.	Atlanta, Ga.
219	Thomas J. Gent, Jr.	Crestwood, N.Y.
233	Maurice M. Simons	Ft. Leavenworth, Kans.
234	Richard C. Hopkins	Topeka, Kans.
251	George B. O'Connor	Yonkers, N.Y.
255	Jack Roberts	New York, N.Y.
257	George M. Jones	Memphis, Tenn.
270	Glenn C. Thompson	Roanoke Rapids, N.C.
271	Samuel B. Knowles, Jr.	Beechhurst, N.Y.
274	Ralph O. Lashley	Richmond, Ind.

---oOo---

AIR CORPS OFFICERS PROMOTED

The following 2nd Lieutenants of the Air Corps were promoted to 1st Lieutenant with rank July 1, 1935: William A. Schulgen, Daniel B. White, Donald H. Baxter, Samuel O. Redetzke and Roy T. Wright.

LIEUT.-COLONEL HERBERT A. DARGUE

Belonging to a small group of Air Corps officers who were affiliated with Army aviation practically from its inception is Lieut.-Colonel Herbert A. Dargue, now Assistant Commandant of the Air Corps Tactical School, Maxwell Field, Ala. He became associated with aviation while stationed in the Philippine Islands as a second lieutenant of the Coast Artillery Corps, having been detailed to the Aviation Section, Signal Corps, in March, 1913, and serving with this branch in the Islands at Fort McKinley and later at Fort Mills, Corregidor Island.

With an old hydroplane which he kept in repair, he made numerous flights and assisted the Coast Artillery very materially in locating targets invisible from batteries, observed the effect of siege gun firing at these targets, reconnoitered Mariveles and south shores to assist in selecting routes of travel between the shore lines and neighboring points, and conducted successful experiments in sending radio messages from the hydroplane.

At that time an aviation school was conducted at Fort William McKinley, with Lieut. (now Colonel) F. P. Lahm, 7th Cavalry, as instructor. There were six enlisted mechanics on duty at the school and three student officers taking instruction, Lieut. Dargue being one of them. Lieut. Dargue received the rating of Military Aviator, July 19, 1913, and the rating of Junior Military Aviator as of July 22, 1914.

Born at Brooklyn, New York, November 17, 1886, he graduated from the United States Military Academy, June 13, 1911, and was commissioned a second lieutenant of Coast Artillery. His first assignment to duty as an officer of the Army was in the Philippines where, prior to his detail for aviation duty, he served for six months with the 41st Company and for the next eight months with the 138th Company, Coast Artillery Corps.

Leaving the Philippines in January, 1915, Lieut. Dargue proceeded for duty at the Signal Corps Aviation School at San Diego, Calif. Considering the type of aircraft utilized in those early days of aviation and the difficulties encountered in piloting them, he accumulated up to that time quite an impressive flying record, making 189 flights for a total flying time of 73 hours and 31 minutes.

In December, 1915, Lieut. Dargue was transferred to duty with the 1st Aero Squadron at Fort Sam Houston, Texas. While assigned to this Squadron he saw service with the Punitive Expedition into Mexico under General Pershing, from March 19 to May 4, 1916, and performed a considerable amount of flying. Piloting airplanes considered wholly unsuited for military

operations, these few months of service in Mexico proved very eventful. All officer pilots on duty with the Squadron were constantly exposed to personal risk and physical suffering. Due to the inadequate weight-carrying capacity of the airplanes, it was impossible to carry even sufficient food, water or clothing on many of the reconnaissance flights. During their flights the pilots were frequently caught in snow, rain and hail storms which, due to inadequate clothing, invariably caused excessive suffering. In several instances, the pilots were compelled to make forced landings in desert and hostile country, 50 to 70 miles from the nearest troops. In every case the airplanes were abandoned or destroyed and the pilots, after experiencing all possible suffering due to lack of food and water, would finally work their way on foot, through alkali deserts and mountains, to friendly troops, usually arriving thoroughly exhausted as a result of these hardships.

On one occasion, Lieut. Dargue, accompanied by Captain B. D. Foullois, the present Chief of the Air Corps, as observer, flew from San Geronimo to Chihuahua City to enable the latter to deliver despatches to the American Consul at that point. After Captain Foullois left the plane, Lieut. Dargue took off, in accordance with instructions, to join another army plane which had landed to the north of the town. He was immediately fired upon by four mounted rurales. Fortunately, Captain Foullois heard the shots and succeeded in stopping the firing, but the rurales arrested him and took him to the city jail. Succeeding in getting word of his arrest to the Military Governor of Chihuahua, the latter ordered his immediate release.

After landing alongside the other Army plane, piloted by Lieut. Carberry, from which the observer, the late Captain Thomas F. Dodd, had departed in order to deliver duplicate despatches to the American Consul at Chihuahua City, a large crowd of natives, Carranzista soldiers and officers, collected around both planes, hurling insulting remarks, burning holes with cigarettes in the wings, slashing the cloth with knives in several places, and extracting bolts and nuts from various parts of the planes.

Feeling that the mob would ultimately wreck the planes, Lieuts. Dargue and Carberry decided to fly them to the smelters of the American Smelter and Refining Company, six miles from Chihuahua City. Lieut. Carberry got away without difficulty, but Lieut. Dargue, taking off in the midst of a shower of stones thrown at him by the mob, had only flown a short distance, when the top section of the fuselage flew off, damaging the stabilizer and forcing him to make an im-

mediate landing. He then stood off the crowd without further damage to the airplane or to himself until the arrival of a guard sent by the Military Governor at Captain Foulois' request.

On April 15, 1916, Lieut. Dargue exceeded all previous long-distance flights by accomplishing a reconnaissance mission from Columbus, New Mexico, to Boca Grande, Pulpit Pass, Dublan, Namiquipa and Satevo, involving a total distance of 415 miles. Four days later during a reconnaissance mission from San Antonio, Texas, to Chihuahua City, Lieut. Dargue, accompanied by Captain R.E. Willis, Observer, was forced to land in the hills, due to motor failure. His plane was completely wrecked, but he escaped without injury. Captain Willis, pinned under the wreckage, was considerably bruised. The airplane was burned on the spot, and the two aviators with their personal equipment started to walk to San Antonio, their nearest base, a distance of about 65 miles. Two days later, after constantly suffering hardships due to lack of food and water, they reached San Antonio.

Returning to the Signal Corps Aviation School at San Diego on July 11, 1916, Lieut. Dargue remained there until July 3, 1917. On the 13th of that month, he was transferred to the Field Artillery, and he served with Battery F, 16th Field Artillery, at Fort Robinson, Wisconsin, until the latter part of September, 1917, when he was assigned to duty at the School for Aerial Observers at Fort Sill, Okla.

From August 17, 1918, to October 21, 1918, he was on temporary duty with the A.E.F. in France and England, making a study of the training of pilots, observers and enlisted men. Upon his return to the United States, he was assigned to duty in the Office of the Director of Military Aeronautics, Washington, D.C., as Assistant Chief of Training, for a short period. He then took the course at the Air Service Engineering School at McCook Field, Dayton, Ohio, graduating in 1920. He entered this school with the temporary rank of Lieut.-Colonel, reverted to his former rank of Captain, but was promoted to Major, Air Service, on July 1, 1920, these changes occurring during the reorganization of the Army to its regular peace-time status.

From the Engineering School, Major Dargue returned to Washington, serving for a short time in the Office of the Chief of Air Service as a member of the Advisory Board, then as Chief of the Operations Division and later as Chief of the War Plans Section. This tour of duty was followed by his entering as a student at the Command and General Staff School, Fort Leavenworth, Kansas, from which he graduated with distinc-

tion in 1924, returning again to Washington for duty in the Training and Operations Division, Office of the Chief of Air Service.

Major Dargue was selected as Commanding Officer of the Pan-American Flight around South America for which he, as well as the other members of the flight, was awarded the Distinguished Flying Cross, the citation accompanying same being as follows:

"For extraordinary achievement while participating in an aerial flight. Major Dargue, as one of the pilots of the airplane New York and as commanding officer of the Pan American Flight, December 21, 1926, to May 2, 1927, by his untiring energy, broad vision, and technical knowledge assisted materially in the organization of this important expedition. His leadership, skill, sound judgment, and courageous conduct were vital factors in bringing to a successful completion this mission of good will. In the excellent performance of his many important duties, he brought great credit to himself and to the Army of the United States, and contributed to the cause of Pan American amity." The members of this flight were also awarded the Mackay Trophy, tendered annually for the most meritorious flight by an Army pilot or pilots during the year.

During the course of the Pan-American Flight and just prior to landing at Buenos Aires, Argentina, Major Dargue narrowly escaped death, following a mid-air collision with one of the other planes of the flight. Immediately following the collision, the two planes fell together in a violent spin and, as soon as he loosened his safety belt, it was impossible to remain with the plane, so great was the force tending to throw him out. As he left the plane, the parachute became entangled with the wing or the stabilizer. "My parachute ring must have caught on something," Major Dargue stated in his report of the jump, "for I have no recollection of pulling it, and yet my parachute opened just as I was leaving the plane and caught on the wreckage. At the same time I received a violent thud in the left side from striking some part of the plane. I was carried rapidly toward the ground with the wreckage and recall distinctly thinking this was the end. It seemed impossible to escape, but all of a sudden a giant hand held me aloft and I looked above to see a rip in my parachute from skirt to crown and two large holes, the size of the top of an office desk. Several shroud lines were cut and dangled all around. Pieces of plane filled the air and I caught a glimpse of another parachute far above me."

A double crash, and one plane burst into flames and then I struck the ground

* Lt. E.C. Whitehead, co-pilot.

rather violently. I could not have been very high when my parachute broke away from the wreckage and saved my life, for it seemed only a couple of moments between the opening of the chute and my safe landing."

Shortly following the return of the Pan-American flyers, Major Dargue, in the same type airplane utilized in the South American Flight, made a good will tour of some 70 cities in the United States, embracing 35 States. The City of Ottawa, Canada, was also visited. This flight involved a total distance of approximately 10,000 miles.

Major Dargue remained in the War Plans Section, Office of the Chief of the Air Corps, until August 15, 1928. He then completed the one-year courses

at the Army War College, Washington, D.C., and the Naval War College at Newport, R.I., following which he was assigned to duty at Langley Field, Va., as Commanding Officer of the 2nd Bombardment Group. He continued on this duty until August, 1933, when he was assigned as Commanding Officer of the Second Bombardment Wing, Langley Field. On October 18, 1934, he assumed the duties of Assistant Commandant of the Air Corps Tactical School at Maxwell Field, Ala., being promoted on March 4, 1935, to the temporary rank of Lieut.-Colonel during the period of his tenure of this position.

At this writing Lieut.-Colonel Dargue is credited with a total flying time in excess of 4,250 hours.

---oOo---

AWARD OF CONTRACT FOR BASIC TRAINING AIRPLANES.

The Assistant Secretary of War, Hon. Harry H. Woodring, recently announced the award for 42 basic training airplanes; for spare parts, equivalent to 3 airplanes; and for certain data, to the North American Aviation, Inc., Dundalk, Maryland. The amount of the award totals \$559,731.80.

The price per plane was \$12,100.00, making a total of \$508,200.00 for the 42 airplanes. The cost of the spare parts was \$36,300.00, and that of the data \$15,231.80.

The circular proposal inviting bids for this basic training airplane was

issued to the aviation industry on August 22, 1934, with opening date on April 22, 1935.

In accordance with the established practice of the War Department, the airplane for which the award was given was thoroughly tested by repeated flights. The plane is single engined with a maximum speed of 175 miles per hour, and with a service ceiling of 20,000 feet. It has complete radio installation, but no armament. It has a gross weight of 4150 pounds, of which approximately 1150 is its useful load, including pilot and student.

---oOo---

THE FIELD ARTILLERY SCHOOL CLOSES FOR YEAR

The Field Artillery School, Fort Sill, Oklahoma, closed on Friday morning, June 28th, with the firing of "Lights" and "Mediums" at the fleeing Reds as they left for parts east via North and South Arbuckle.

General Field Exercise No. 8 is the culmination of the school year, and is a problem which embodies all the principles of Tactics and Technique of Artillery as taught at the School.

In order better to be equipped for co-operation in this problem, Flight "E," 16th Observation Squadron, was augmented by three additional observation planes with pilot-observer teams from Brooks Field, also by three A-3's with smoke screen apparatus from Barksdale Field.

At the outset of the problem, three airplanes with pilot-observer teams were designated to act as Blue Observa-

tion and the remaining two observation planes with teams to operate as Red Observation. The Attack planes, with the exception of one prearranged smoke mission, operated as Red attack aviation.

With this set up the Division Aviation for Blues as well as Reds operated in a satisfactory manner. The Red attack simulated attacks on troop columns on radio call and were in all cases successful in "annihilating" the Blues to their delay and discouragement.

On June 29th, the visiting airmen and aircraft returned to their home stations to routine duties, while Flight "E" rejoined at the approaching half day summer schedule and at the successful completion of another year with the Field Artillery School.

---oOo---

---oOo---



Bulletin No. 3, recently issued by the Headquarters GHQ Air Force, Langley Field, Va., invites the attention of all commanders to the following War Department policies governing the organization, on a clear-cut functional basis, of the various type units of the Air Corps at stations where GHQ Air Force units are located, viz:

a. The Station Complement: At each of the home stations, a station complement, not a part of the GHQ Air Force, will be organized consisting of Air Corps, Quartermaster, Ordnance, Signal Corps, Medical and other service personnel necessary to operate permanently the respective stations. This station complement will form the nucleus of the Corps Area service command upon mobilization and will be organized so as to operate the station on an inactive status when combat units are absent.

b. The Service Squadron: Mobile service squadrons capable of servicing and maintaining the combat units and taking over the administration, operation and maintenance of a field other than the home station from which these combat units may be operating.

c. The Combat Squadron: Highly mobile tactical units consisting only of such personnel and equipment as are essential for their self-sustained operation in the field for short periods of time.

2. The attachment of enlisted men assigned to the GHQ Air Force, for duty with the station complement, is not favored by this headquarters. Such procedure so interlocks the operation of the station complement with that of the GHQ Air Force as practically to preclude operations by units of the GHQ Air Force away from their home stations. It requires a complete reorganization of the station complement when tactical units are sent into the field. It prevents a test both of the GHQ Air Force units and of the station complements. The attachment of these additional men to the station complement prevents a test of the ability of the station complement to operate with a predetermined minimum of required overhead. It withdraws from the tactical units men essential to training for operations in the field.

3. It is felt that the stations at

which GHQ Air Force units are located should be reorganized on a functional basis, with a clear-cut line of demarcation drawn between the functions performed by GHQ Air Force units and those performed by the station complement. The operating functions charged to the station complement should be the same whether or not GHQ Air Force units are located at their home stations. The training given service squadrons cannot be sporadic and accomplish the desired results. It must be continuous and habitual if the Air Force is to be in fact an ever-ready striking force. Such reorganization as may be required should utilize to the maximum the personnel and facilities of service squadrons as units, and not as isolated individuals executing station complement functions.

4. In order to properly service test the principles upon which the GHQ Air Force has been established, within the very limited period of time allotted for the purpose, it is the policy of this headquarters that:

a. Combat crews will be organized and trained as units. It is not sufficient that there be a proper total of trained pilots, bombers, gunners, etc. It is essential that trained teams accustomed to working together be developed to man the type of airplane with which the squadron is equipped.

b. Service squadrons, organized and trained, to operate as units are vital to the accomplishment of the Air Force mission. The efficiency of these organizations will be the primary concern of group commanders until such time as they are firmly established and functioning. Efficiency of combat units is of little moment in sustained operations unless properly supported by an efficient supply and maintenance service.

c. In view of the extreme shortage of airplanes that now exists and will continue to exist for the next three years, it is essential that the maximum number possible be kept in commission at all times. To do this, fixed hours of work must give way to accomplishment of objectives. Schedules of calls will be considered a guide and not a mandate for the employment of time. All agencies will be so organized as to be capable of rendering necessary services upon short

notice at any hour of the day or night.

---oOo---

Brigadier General Henry H. Arnold, Commander of the First Wing, GHQ Air Force, inspected the planes and personnel of Hamilton Field, Calif., on July 12th to insure that the organizations are prepared to conduct field operations for a period of three days. Lieut.-Col. Clarence L. Tinker had placed his command in preparation for this quarterly load test of airplanes with full military equipment, in compliance with an order from the Commanding General, GHQ Air Force. Machine gun and bombing competition featured the test, the pilots dropping all types of bombs and firing ten rounds from each machine gun. The Martin Bombers took off with their full military loads, which averaged 2,000 pounds of bombs plus other impedimenta, with ease about 10:00 a.m. The planes and personnel of Headquarters Flight, 31st, 11th and 9th Bombardment Squadrons participated in the aerial inspection. Test flights of 25,000 feet and above with oxygen masks showed the ability of the Bombers to soar to great heights. All personnel were also subjected to a ground inspection, including the 69th and 70th Service Squadrons.

According to word received from Hamilton Field, the 11th and 31st Bombardment squadrons were scheduled to fly to Salt Lake City on July 22nd as the 7th Bombardment Group's contribution to the concentration of the 1st Wing to be held there; that approximately 19 Martin Bombers were to wing to the Mormon City to enable the pilots to familiarize themselves with the country. Major Harold D. Smith was slated to lead 8 planes of the 31st Bombardment Squadron on these maneuvers. Three days were to be consumed in these training missions with the purpose of stressing the fact that Salt Lake City is one of the centers from which the 1st Wing must be prepared to operate in the defense of the West Coast. Brigadier General Henry H. Arnold was to supervise the problems and Lieut.-Colonel Clarence L. Tinker was to fly in his Bird O'Prey as the commanding officer of the 7th Bombardment Group.

Several of the squadrons stationed at Langley Field, Va., have recently been engaged in operations which were interesting in that they were unusual and were accomplished at bases other than Langley Field. From a tactical point of view, the operations of the 59th Service Squadron, combined with the 96th Bombardment Squadron, both with their complete complement of officers, enlisted men and equipment, are probably the most interesting. They were engaged in the first of a series of tests of the new

tables of organization under the GHQ Air Force and have established an operating base at the Richard E. Byrd Airport at Richmond, Va.

The movement from Langley Field began at 7:00 a.m., July 11th, and ended at 10:10 a.m. Actual war conditions obtained throughout the period of the maneuver, with the Service Squadron maintaining the Bombardment Squadron as prescribed in the GHQ directive. All bombs, ranging from 600 to 2,000 pounds, are transported from the rail head and spotted for loading by the Armament Section. Gasoline and oil are also spotted promptly to avoid any delay in the servicing of the ships which are engaged in the tactical missions. Ammunition is inspected and loaded in belts and delivered to the ships.

The problem presented to the several departments of the Service Squadron can more readily be appreciated when it is known that the Bombardment Squadron is performing two or three-hour missions daily for seven days, including both day and night assignments. Each ship is fully armed with guns and bombs and carries a regularly assigned combat crew to man all stations.

It is too early to ascertain definitely the advantages and disadvantages of the new tables of organization under actual field conditions, but tests such as the above will furnish valuable information by which the efficiency of the organization can be increased.

---oOo---

RECRUITS NEEDED BY HAMILTON FIELD

According to the News Letter Correspondent, Hamilton Field needs 111 recruits. The recruiting party designated to go out and get them consists of 2nd Lieut. James E. Roberts, Air Reserve, First Sgt. Michael Binder, Staff Sergeants Ray C. Clemons, Delno W. Ross and Sergeant Bryan I. Doughty. Their area consists of a tier of counties than run up to the Oregon line, where ranching is the popular pastime.

"Rodeos and frontier conditions abound in this area," continues the Correspondent. "It should furnish some 'Huskies' for the Air Corps. The life of an Air Corps soldier is as exciting and as remunerative as that of a ranch hand."

---oOo---

An O-19C Observation plane at France Field, Panama, was equipped with a supercharged 10-1 compression ratio motor for high altitude tow target missions. This motor has proven very successful in this high altitude work.

---oOo---

First Lieut. Kenneth N. Walker, who recently graduated from the Command and General Staff School, Ft. Leavenworth, Kans., reported for duty at Hamilton Field, and was assigned to the 7th Bombardment Group.

V-6827, A.C.

TEMPORARY PROMOTION OF AIR CORPS OFFICERS

To Major

Captain Samuel C. Skemp assigned as a member of the Air Corps Board, Maxwell Field, Ala., June 22, 1935.

Captain Mark R. Woodward assigned as Director of Ground Training, Air Corps Advanced Flying School, July 18, 1935.

Captain Herbert W. Anderson, from duty as Operations Officer, Air Corps Technical School, Chanute Field, Ill., to Director, Armament, at that School, July 24, 1935.

Captain Earl H. DeFord assigned as Chief, Air Intelligence, Air Corps Tactical School, Maxwell Field, Ala., July 30, 1935.

To Captain

1st Lieut. Everett S. Davis assigned as Flight Commander, Air Corps Detachment, Fort Lewis, Wash., June 22, 1935.

1st Lieut. Edwin R. French assigned as Supply Officer, Philippine Air Depot, Nichols Field, P.I., July 16, 1935.

1st Lieut. William A. Matheny assigned as Flight Commander, 21st Observation Squadron, Bolling Field, D.C., July 13, 1935.

1st Lieut. Stanley K. Robinson assigned as Flight Commander, 21st Observation Squadron, Bolling Field, D.C., July 13, 1935.

1st Lieut. Reginald F.C. Vance assigned as Intelligence and Operations Officer, 41st Observation, July 18, 1935.

1st Lieut. Robert W. Douglass, Jr., assigned as Flight Commander, 55th Pursuit Squadron, Barksdale Field, La., July 23, 1935.

1st Lieut. Elmer P. Rose assigned as Engineer and Armament Officer, 6th Composite Group, France Field, Panama, July 26, 1935.

1st Lieut. Clarence T. Mower assigned as Flight Commander, 25th Bombardment Squadron, France Field, Panama, July 26, 1935.

To First Lieutenant

2nd Lieut. Wendell W. Bowman assigned as Communications Officer, 96th Bombardment Squadron, Langley Field, Va., July 30, 1935.

2nd Lieut. Othel R. Deering assigned as Transport Officer, 71st Service Squadron, Barksdale Field, La., July 18, 1935.

---oOo---

The following-named Air Corps officers, holding temporary increased rank, were assigned to other duties, but retain such increased rank:

Major Robert T. Cronau from 20th Bombardment Squadron to Intelligence and Operations Officer, 2nd Bombardment Group, Langley Field.

Lieut.-Colonel William O. Ryan from assignment as Director to duty as Assistant Director, Air Corps Board, Maxwell Field, Ala.

Captain James S. Stowell from Director, Clerical, Air Corps Technical School, Chanute Field, Ill., to duty as Director, Basic Instruction, that School.

Captain Donald W. Benner from Engineer and Armament Officer, 6th Composite Group, to Adjutant, Panama Air Depot, France Field, C.Z.

Captain Frank H. Robinson from Flight Commander, 25th Bombardment Squadron, to Intelligence and Operations Officer of that squadron.

Captain Thurston H. Baxter from Supply Officer, 20th Pursuit Group, Barksdale Field, La., to Intelligence and Communications Officer, Third Wing, that station.

---oOo---

OFFICERS RELIEVED FROM TEMPORARY RANK

Major Warren R. Carter from assignment and duty as Chief, Air Intelligence, Air Corps Tactical School, Maxwell Field, Ala., July 29, '35.

Captain Ernest S. Moon as Adjutant, Air Corps Tactical School, Maxwell Field, Ala., and to duty at that station as Student, 1935-36 course, July 29, 1935.

Captain Don W. Mayhue from Intelligence and Communications Officer, 3rd Wing, and from further duty at Barksdale Field, August 5, 1935.

Major Leland W. Miller from Commander, 61st Service Squadron, Mitchel Field, N.Y., July 16, 1935.

1st Lieut. Harold L. Smith from Station Complement, March Field, Calif., and assigned to duty with GHQ Air Force, that field, July 23.

---oOo---

CHANGES IN STATION OF AIR CORPS OFFICERS

To March Field, Calif.: Major Early E.W. Duncan from Hawaiian Department. Previous orders assigning him to Chanute Field revoked.

To Maxwell Field, Ala.: Captain George H. Sparhawk, 19th Pursuit Squadron, Hawaii. Relieved from temporary rank upon departure.

To Wright Field, Ohio: Captain Edwin R. Page, upon completion tour of duty in Hawaii.

To Rockwell Field, Calif.: Captain Harry G. Montgomery, Jr., 50th Obs. Squadron, for duty with GHQ Air Force. Relieved from temporary rank upon departure from Hawaiian Department. -
2nd Lieut. Dolf E. Muehleisen, assignment to Bolling Field, D.C., revoked.

---oOo---

PROMOTIONS: to 1st Lieutenant - 2nd Lieuts. William C. Dolan, rank June 21, 1935; Ivan L. Farman, June 22, 1935.

RETIREMENT: 2nd Lieut. Louis A. Vaupre, July 31, 1935, with rank of 1st Lieut. as of July 1, 1935, for disability incident to the service.

---oOo---

Changes in the duties assigned the following-named Air Corps officers were made, no temporary rank being involved:

Captain William N. Amis from GHQ Air Force, Barksdale Field, La., to duty with Station Complement, that field.

Captain Burton E. Lewis from 1st Bombardment Squadron, Mitchel Field, N.Y., to duty with Station Complement, that station.

1st Lieut. Robert M. Losey from Hqrs. First Wing, March Field, to duty with Station complement, that field, as Meteorological Officer.

Colonel Jacob W.S. Wuest, upon arrival at Rockwell Field, to assume command of Rockwell Air Depot. Previous orders in his case amended.



Names still continue to be entered on the Register of the Caterpillar Club. This year, up to and including July 16th, there were 23 initiations into this mythical organization, and three other members were given second degrees, namely, Captain Richard I. Dugan and Flying Cadet George S. Buchanan, Air Corps, and Lee Gehlbach, noted civilian test

pilot and former Air Corps officer who at one time served with the First Pursuit Group at Selfridge Field, Mt. Clemens, Mich.

In the year 1934, up to and including July 16th, there was a total of 51 initiations into the Mystic Order of Caterpillars, or 28 more than for the same period of time this year - an encouraging sign, let us hope.

Up to this writing, 716 names are entered on the Caterpillar Club roster, with the number of jumps recorded as 752. Colonel Charles A. Lindbergh, Caterpillar-in-Chief, has four "hash" marks, or what have you, by virtue of his four emergency parachute jumps; Major Frank O'D. Hunter, Air Corps, three; and 31 others are perfectly content with two each.

In the News Letter of May 15, 1935, it was stated that a total of 706 airmen and airwomen had made emergency parachute jumps up to that time. Since then, ten names have been added, prominent among which is that of Major-General George E. Leach, who now bears the distinction of being the highest ranking Caterpillar.

Those who have joined the Order since April 17th, the latest jump recorded in the News Letter, are listed below, as follows:

No. Name, Rank and Place of Jump

707	May 6	Lee Gehlbach, civilian test pilot, Ravenna, Ohio.
707*	May 17	Lee Gehlbach, civilian test pilot, Dahlgren, Va.
709	May 27	William A. Matheny, 1st Lieut., Air Corps, Tallassee, Ala.
690*	May 30	George S. Buchanan, Flying Cadet, Air Corps, Montpelier, Indiana.
708	May 11	Frank P. Hunter, Jr., 1st Lieut., Air Corps, Brujas Point, Panama.
710	June 21	Hanlon H. Van Auken, Captain, Air Corps, Chesterfield, Mich.
711	June 22	Francis H. McDuff, Flying Cadet, Air Corps, Banning, Calif.
115*	June 22	Richard I. Dugan, Captain, Air Corps, Banning, Calif.

712	June 22	John L. Giles, Technical Sergeant, Air Corps, Banning, Calif.
713	June 27	Armine F. Herold, Major, Air Corps, near Taylortown, La.
714	July 11	William J. Bell, 1st Lieut., Air Corps, Guelph, Ontario, Canada.
715	July 16	George E. Leach, Major General, Conception, Arizona.
716	July 23	Forrest G. Allen, 1st Lieut., Air Corps, Chanute Field, Ill.

NOTE: * second emergency jump.

Captain Richard I. Dugan, it will be noted from the number opposite his name, is one of the early members of the Caterpillar Club, he having made his first jump on November 22, 1928, while a Flying Cadet at Kelly Field, Texas. In his second initiation, he figured in a triple jump with Flying Cadet McDuff and Technical Sergeant Giles. While flying in the vicinity of Los Angeles, Calif., the left motor of the airplane, which was piloted by Cadet McDuff, suddenly burst into flames. According to newspaper reports, Captain Dugan credited Cadet McDuff with having saved his life, stating that McDuff bravely remained at the controls until his two passengers had leaped free of the burning aircraft.

Lieut. Matheny, recipient of the Cheney Award for 1929 for bravery in rescuing a fellow flyer from a burning airplane, stated in his report of the jump that he was forced to resort to his parachute when, flying at night, engine failure occurred when the airplane was over terrain unfavorable for a safe landing.

"Once definitely committed to jumping," he said, "the pilot slowed the ship down, unfastened his belt, hooked his left thumb in the rip cord, pulled his feet up into the seat, grabbed the stick and righted the ship, which had started off to the left, and then dove out head first over the right side. As soon as the sensation of rapid falling hit him he struck his left hand with his right and pushed out. Looking back he saw the white shape of the as yet unfilled parachute being drawn out of its pack. Almost exactly coincident with that, the jar of the opening parachute hit him and he swung free and safe, with absolutely no further sensation of falling. * * The greatest source of bother to the pilot as he left this ship was its extreme instability when flying hands off. There was never any slightest question in his mind as to whether he could find and pull the rip cord or as to the dependability of the parachute. As a matter of fact, finding and pulling the rip cord was automatic without any thought at all by the pilot."

Strange as it may seem, Flying Cadet George S. Buchanan became a second degree member of the Caterpillar Club without even pulling the rip cord of his parachute. He was piloting a Pursuit plane in the vicinity of Montpelier, Ind., when a flare ignited in the container and was burning underneath the ship. Orders were relayed to him by radio to jump, following another radio message instructing him to attempt to release his flares. He failed to receive this latter message, due to poor receptive conditions.

Unaware at the time of the true cause of the fire, Cadet Buchanan attempted to extinguish it by cutting the main line switch and tearing out all the electrical wiring behind the instrument panel. He then slipped the aircraft in an attempt to put out the fire. It was then that he received the relayed message that the plane was still burning and that he should jump.

Leaving the airplane by opening the door on the left side, Cadet Buchanan climbed out on the wing, using the landing wires as a handhold. "I attempted to place my right foot against the side of the fuselage and push myself away," he stated. "The wing was slippery and the position of the aircraft was such that this was impossible to do. I was blown off by the slipstream and struck the stabilizer with my left side. The blow was hard enough to split the ripcord housing and open the parachute without my having to pull the D-ring. When I landed the D-ring was still in the socket."

Major Armin F. Herold, Air Corps, leading the second flight of a two-flight squadron from Barksdale Field, La., in a signal drill, was forced to "bail out" when one of the planes in the formation cut off the rudder and stabilizer of his plane just above the horizontal stabilizer. Immediately his plane started falling in a fast spin.

"I attempted to leave the airplane twice while it was spinning," Major Herold stated, "but was unable to do so because of air pressure from outside. I brought the airplane out of the second spin and opened the cockpit door and reached for landing wires on left side. With switches 'cut' the nose of the airplane dropped and the aircraft picked up speed rapidly, but I succeeded in pulling myself out of the cockpit and hung literally streamlined and suspended from the landing wires. At the speed I was traveling, I feared I might strike the empennage if I let go of the landing wires, so I held on for a short time waiting for the airplane to begin a spin or in some way change direction. My hands were being cut badly by the landing wires, so I finally let go and cleared the tail section of the aircraft without difficulty.

My reactions and feelings were perfectly normal, much to my surprise. There seemed plenty of time for everything I had to do, no hurry or rush, and the thought that I might not get out of the aircraft or the parachute would fail did not once enter my mind. After the parachute opened I was rather confused, as the opening occurred while I was still traveling fast, stunning me to a degree where I was not really normal until after I rested on the ground a few minutes later."

General Leach, Chief of the National Guard Bureau, was flying from Washington, D.C. to Santa Maria, Calif., piloted by Captain Charles M. Cummings. While over desert country in Arizona, the plane caught on fire, believed by Captain Cummings to be due to a leaking gasoline line. According to newspaper reports,

Captain Cummings said he told the General "to get ready to jump," but that all that General Leach heard was the word "Jump," and he lost no time in following what he thought were the pilot's directions. The reports also credit the General as saying: "I tumbled like a ball before the chute finally opened, then I fell in the biggest hole outside of the Grand Canyon."

General Leach cut his left arm either in crawling out of the plane, while leaving it or in landing on a rock. He reached Kingman, Arizona, after wandering for some hours through wastelands, and had his wound dressed by a physician.

---oOo---

GUNNERY PRACTICE BY 35th PURSUIT SQUADRON

The 35th Pursuit Squadron, Major A.E. Waller, commanding, from Langley Field, Va., moved into the Gunnery Camp at Virginia Beach on July 2nd, and remained there until July 12th.

Ten Pursuit ships left Langley Field at 8:40 a.m., and the first tow target mission was fired exactly one hour later. The normal schedule called for ground gunnery at 5:00 a.m., followed by tow target. Firing was generally completed by 10:00 a.m., and after service and maintenance of the airplanes, the remainder of the day was devoted to baseball or swimming.

During the stay, 12,770 rounds of 30 caliber and 870 rounds of 50 caliber ammunition was fired. Nine pilots flew 84 hours on gunnery missions, an average of over nine hours per pilot. Captains Peaslee and Dorr were the only two members of the Squadron to fire record. The former made a score of 713 on ground targets and 114 on tow targets. Captain Dorr made a score of 654 on ground targets and 145 on tow targets.

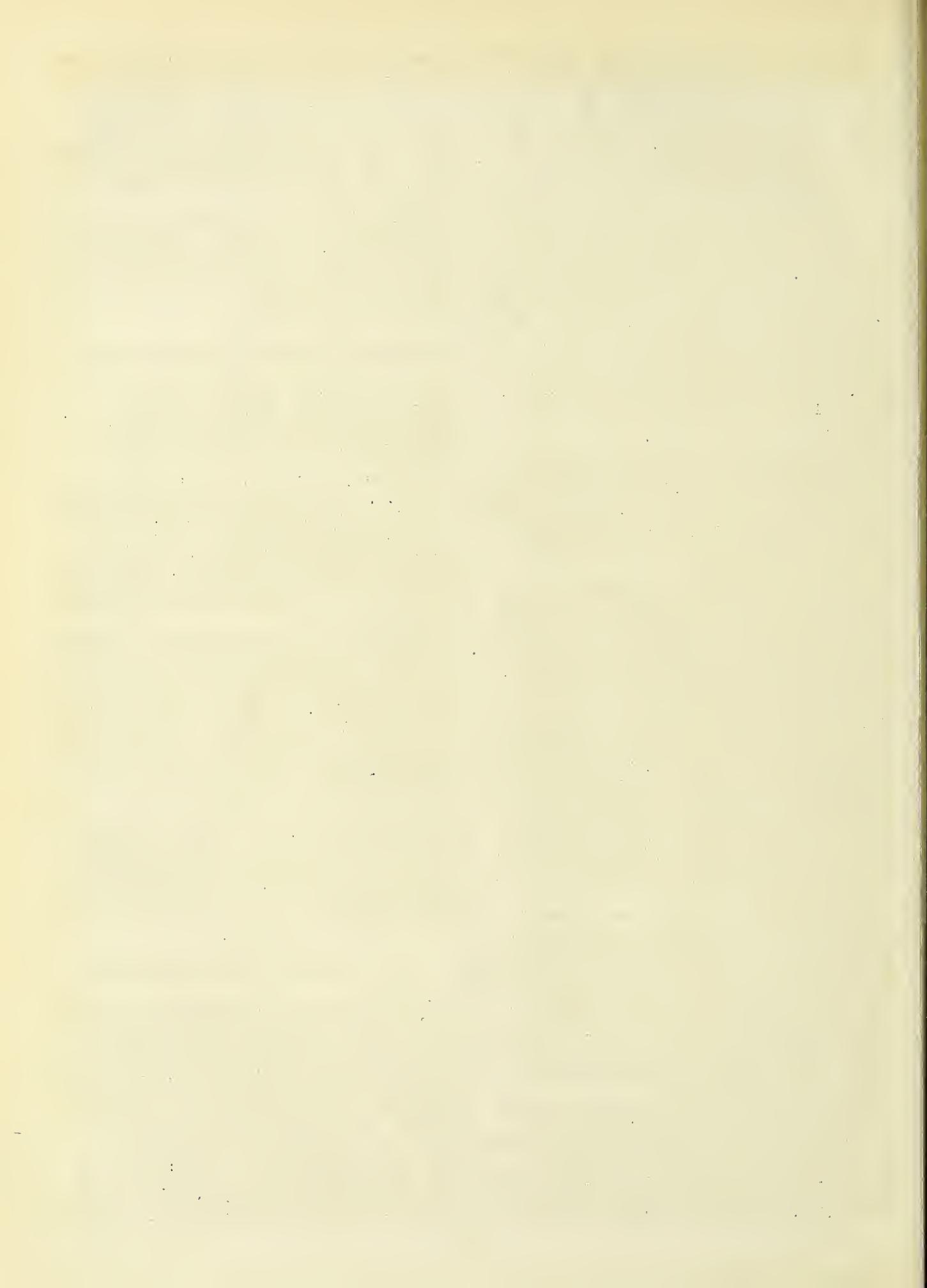
All who made the trek say that the stay was most pleasant, with the exception of four o'clock breakfast and one violent electric storm. The News Letter Correspondent says: "To those of us who know Virginia Beach and stayed at Langley it was an enviable ten days for the 35th."

---oOo---

D.F.C. PRESENTED TO CAPTAIN ANDERSON

Captain Frederick L. Anderson, of Hamilton Field, Calif., who won the Distinguished Flying Cross for piloting a burning airplane above the City of San Francisco and delaying his jump therefrom until it could fall harmlessly into San Francisco Bay, received this decoration on July 3rd for his extraordinary heroism. Colonel Roy C. Kirtland, Air Officer of the 9th Corps Area, presented the medal to Captain Anderson at 11:45 a.m. before the entire garrison at Hamilton Field.

Captain Anderson, Caterpillar No. 691, performed the above deed on December 14, 1934.



NOTES — FROM —



AIR CORPS FIELDS

Hamilton Field, Calif., July 20th.

Seventeen of the 26 men, who comprised the post personnel at Hamilton Field from the very first, staged a reunion dinner on the night of July 17th at the Cotati Inn, Cotati, Calif. This was the second anniversary of their arrival at Marin's beautiful air field at Hamilton. Among those who attended the dinner were Master Sergeants Henry A. Doirant, Christian E. Peterson, Staff Sergeant Erik W. Lindhe, Sergeants William T. Oglesby, Nathaniel W. White, Corporal Anselmi, Privates Irving E. Ashton, John Cerason, Charles G. Fraser, Arthur Friend, Lawrence W. Pippin, Roy W. Robinson, Clifford W. Temple, James R. Wright and Charles F. Britt.

Captains James W. Spry, Edgar T. Noyes, Charles B. Stone, III, 1st Lieuts. Richard C. Lindsay, Roy H. Lynn, William Ball and Birrell Walsh have been designated as instructor pilots at this station.

Flying Cadet Kenneth R. Kreps, Bachelor of Arts in philosophy, University of California, Los Angeles, received his commission as a second lieutenant in the Air Reserve and was assigned to the 31st Bombardment Squadron with which he served as a flying cadet.

Major Walter B. Hough, Post Executive Officer, received his promotion to that grade on June 30th from the War Department.

Captain Oliver K. Robbins is now visiting the Field at the Officers' Club, although still on leave. Rumor has it that he will be assigned to the command of the 69th Service Squadron at this station upon his return to a duty status.

Technical Sergeant Walter A. Waddell is scheduled to sail on August 3rd from San Francisco for service in the Panama Canal Department.

Staff Sergeant John C. London, formerly of the Medical Detachment at Luke Field, T.H., reported at the Station Hospital at Hamilton Field for duty.

Major Lewis R.P. Reese, who has been confined at Letterman General Hospital since July 5th, was given sick leave for one month. Major Arthur G. Hamilton has been sick in this hospital with sinus trouble since July 8.

Captain Howard B. Nurse, formerly construction quartermaster at Hamilton Field, sailed for Honolulu on the PRESIDENT HARRISON on July 19th. He will take full charge of the new Hawaiian air field upon his arrival.

Major Fuy Kirksey piloted a BT-201 to the Rockwell Air Depot on July 15th, while Capt. A.V.P. Anderson ferried to that station a C-14 Transport, accompanied by Sgt. William T. Oglesby as crew chief. These planes are scheduled for overhaul.

The Hamilton Field Aces (Capt. John O. Roady's post team) clashed with the San Quentin All-Stars on June 30th behind the walls of the Big House. Although the "Bombers" piled up five runs in the first inning, the airmen fell before the heavy hitting of the All-Stars, who accumulated 19 tallies against Hamilton Field's 14. Humorous moments occurred as a drive over third base would hit the wall immediately back of it and carom almost anywhere for a two or three bagger. This game has become an annual event in the baseball history of Hamilton Field.

Captain John O. Roady, Post Quartermaster, left on July 20th for 12 days' leave.

France Field, Panama Canal Zone, July 8th.

First Lieut. Richard J. O'Keefe, Air Corps, suffered the very unpleasant experience of being forced down to a watery landing near the Coco Solo Navy Base in a P-12E Pursuit plane on the morning of June 24th. The plane was being flown on a test hop subsequent to a major overhaul and had just cleared the air-drome when the engine failed to function and went completely dead. Lieut. O'Keefe attempted to return to the field but failed in his objective, landing in the shallow water nearby. He was rescued by the Navy "Crash Boat" after a short swim to stay afloat. The plane was towed to the Fleet Air Base by a tender and was later brought back to France Field.

Minor injuries to one knee of the pilot and small damage to the plane resulted from the forced landing.

During the past month, the 7th Observation Squadron lost two O-19C's. One, which came out of overhaul some few months ago, was found

to be so corroded between the inner and outer skins of the monocoque fuselage as to render it unserviceable. It is being considered for survey now. There has been quite a bit of similar trouble on this type of ship lately. Most likely old age together with the moist tropical climate is responsible for this condition.

The 7th Observation Squadron turned over one O-19C to the 16th Pursuit Group at Albrook Field for use in instrument flying in return for two P-12B's, one of which was turned over to the 25th Bombardment Squadron. The purpose in obtaining the P-12B's was to assist both squadrons in acquiring acrobatic time. Unfortunately, however, one of these ships was turned over for survey immediately upon delivery, and orders were published to the effect that no acrobatics would be performed in this type of airplane.

First Lieut. I.W. Ott was made permanent Engineering Officer of the 7th Observation Squadron, vice 1st Lieut. E.P. Rose, who was relieved from assignment to this squadron and appointed Station Inspector.

First Lieut. W.H. Turner has been assigned officer in charge of the A.A.I.S. (Anti-Aircraft Intelligence Service, we presume). Sergeant Irlenborn, Headquarters Squadron, a recent arrival on the field, was detailed as assistant to Lieut. Turner.

Staff Sergeant Donnelly is a recent newcomer to the 7th Observation Squadron.

Tennis enthusiasts at France Field, both officers and enlisted men, have in the past found it necessary to visit the Navy courts or to share the local courts. The completion of the enlisted men's courts, now under construction, will mark an end to that condition. Lt. Montgomery, officer in charge of construction of the new courts, cannot be too highly commended for his work in connection therewith, nor the enlisted men who have labored so strenuously to expedite the completion of the courts.

Lieut. Epler, 7th Observation Squadron, has been quite successful in coaching the Post Basketball Team since Captain C.W. Cousland relinquished the coaching responsibilities. The team has won a number of victories for the Air Corps on this end of the Canal. Lieut. Epler has participated in the majority of the games himself and has proven himself one of the best basketballers on the Isthmus. Privates Ruiz, Watkins and Ely also are responsible in part for the team's showing.

The France Field Swimming Team won second place in the Department Swimming Meet. Pvt. Turner, 7th Observation Squadron, assisted greatly to the final standing. In view of the lack of material and support, the team could hardly have done better.

The Post Basketball Championship was recently won by the Panama Air Depot team. Panama Air Depot talent is very much in evidence in connection with the Post Basketball Team.

San Antonio Air Depot, Duncan Field, Texas.

On July 8th, the Depot had the honor of a visit from the Most Rev. Joseph Gawlina, Bishop and Chaplain-General of the Army of Poland, with the rank of Brigadier-General, and his secretary, the Rev. Jan Morawinski, a Captain in the Polish Army and an airplane pilot. They were escorted by a group of local ecclesiastical and civil dignitaries. Bishop Gawlina and Rev. Morawinski had just arrived from Warsaw on their first visit to the United States and journeyed here immediately by air from the Polish Embassy in Washington to visit Polish communities in Southwest Texas on a tour through the Middle West.

Lieut.-Colonel William O. Ryan, of the Air Corps Board, Maxwell Field, and Lieut.-Colonel Walter Kilner, of that station, passing through this vicinity on an extended flight, enjoyed a round of golf while guests of the Depot Commander, Colonel John H. Howard.

Major George R. Gaenslen, Air Reserve, of San Antonio, in civil life a construction engineer, began his eighth 2-weeks' active duty training tour at the Depot, July 8th.

Captain N.P. Walsh, Quartermaster at this Depot since June, 1934, was transferred on July 6th to Fort Sheridan, Ill., for duty. Captain and Mrs. Walsh and family departed on a month's leave, and the Depot greatly regrets to see them go.

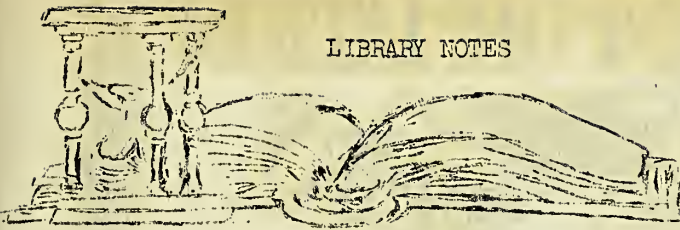
The regular monthly Control Area Supply and Engineering Conference and Luncheon at the Depot was held on July 9th, and was attended by 12 Air Corps officers from stations in this Area and the officers of this Depot.

Barksdale Field, Shreveport, La., July 24th.

With several of the leading boxers of the Air Corps members of the Barksdale Field boxing squad, this sport has become one of the most popular branches of athletics at this station. Two boxing shows each month are staged by the Athletic Association, featuring soldier boxers against leading civilian boxers of the South. The shows have been highly successful in every way, the large outdoor arena being packed with fans on every occasion and the bouts being fast and hard fought.

The Barksdale Field baseball team has turned in a string of 18 victories against 4 defeats for the present season. Piloted by Lieut. J.W. "Grassy" Hinton, the Wingmen have turned back the Maxwell Field Fliers, Pensacola Naval Air Station and several of the leading amateur and semi-pro baseball teams in this section of the country.

Barksdale Field golfers are enjoying the benefit of a well kept 9-hole golf course. Completed a month ago, the course is the scene of much activity early mornings and late afternoons. Among the leading golfers of the field are Col. G.C. Brant, M.F. Harmon, E.L. Naiden, Majors Albert F. Vaughan and A.H. Foster.



LIBRARY NOTES

Some of the More Interesting Books
and Documents
Recently added to the Air Corps Library

D 13.3 Gyroscope 13. The Sperry horizon and directional gyro instruction manual, by Sperry Gyroscope Co., Inc., 10 p. 7 diagrams.

D 52.41 Doble 1. The Doble steam car, by Doble Steam Motors, 15p.

E 10.2 Europe 2. Economics of air transport in Europe. Final edition, by League of Nations. 73p. Report of Special Sub-Committee.

623.74/C56. War from the air - past - present - future, by I.E.O. Charlton. Air Commodore Charlton states that aviation has entirely changed conditions of modern warfare. Cites how shortsighted the nations were on the use of the air arm during the World War, and what will happen if the Service departments, which are constantly preparing for war, continue to follow a policy of laggard conservatism.

629.1312/G91. Our Future in the Air, by Brigadier-General P.R.C. Groves. A brief and simply told survey of commercial and military aviation as it is at present. Emphasizes the necessity of Britain changing its air policy before it is too late. The author says: 'Let us make no mistake; in the world of today there is not the faintest hope of general disarmament nor of the creation of an international police force...We must face our responsibilities and act.'

629.144/Un3a. Airport Bulletin, by Bureau of Air Commerce. A new Bulletin just recently started by this Bureau. The title of the first number is: Airport Grading and Drainage.

-----oOo-----

Scott Field, Belleville, Ill., July 25th.

Recruiting started July 1st to increase the authorized strength of the post to 564 men. At this date, 13 recruits have been assigned to the Station Complement, 25 to the 9th Airship Squadron and 10 to the 15th Observation Squadron.

The following men, who are on detached service at the Stratosphere Camp, are expected back in the near future: Master Sergeant Bennett, in charge of Gondola; Master Sergeant Bishop, in charge of Rigging; Staff

Sergeant Jensen, Parachute Rigger; Sergeant Money, Balloon Rigger; Corporal Van Agtmael, Gas Worker, and Private, 1st Class, Lourin, Radio Operator.

Master Sergeant Bishop has been commended on his quick thinking which probably saved the lives of a number of men when the Stratosphere Balloon was wrecked. In addition to this, the other men were commended on their excellent work.

Captain Ralph O. Brownfield was relieved from assignment and duty with the 15th Observation Squadron and assigned to duty as Adjutant of the Station Complement, retaining his temporary rank of Captain.

Captain Raphael Baez, Jr., was transferred to Walter Reed General Hospital for an operation on June 28th.

The following-named officers recently reported for duty at this station: 1st Lieut. James F. Walsh from Fort Monmouth, N.J.; 2nd Lieuts. Kurt M. Landon from Chanute Field, and John J. O'Connell, Air Reserve, for six months' active duty.

Officers scheduled to report for duty at Scott Field in the near future are: 1st Lt. Haynie McCormick, from Fort Sill, Okla., on or about October 1st, and 1st Lieut. Gerald G. Johnston from the Philippines, on or about October 20th.

Wheeler Field, T.H., July 18th.

On an inspection made by the Department Inspector General; Major W.A. Pickering, I.G.D., the 75th Service Squadron was complimented highly on the appearance of its mess hall and kitchen, day room and supply room. The men in charge of these departments have taken a decided interest in their work.

On June 11th, the 75th Service Squadron Amphibian, with Captain R.H. Clark as pilot and 1st Lieut. C.E. LeMay as co-pilot, departed on an inter-island flight for the purpose of ferrying Colonel G.E. Allin, IGD, Hqrs. Hawaiian Dept., to Hilo on official business.

On June 13, 1935, following emergency orders from Department Headquarters, the Amphibian returned to Oahu, bringing as a passenger Private Clarence F. Drahien, Company "K," 21st Infantry, who had been critically injured at the Kilauea Military Camp. The flight was made in record time. The injured man was picked up at John Rodgers Airport and taken to Tripler General Hospital.

The Amphibian returned to Hilo the same day, and returned again to Oahu with Colonel Allin and Captain Boineau of the Kilauea Military Camp.





TECHNICAL INFORMATION

ENGINEERING AND NEWS



AIR CORPS MATERIEL DIVISION

Floats on Martin Bomber.

Flight tests by Materiel Division officers were made at North Beach Airport, Long Island, New York, on the B-12A (A.C. No. 33-265) equipped with Edo floats containing gasoline tanks of 600 gallons capacity. The airplane flew satisfactorily, and has been delivered to Langley Field for service test by the General Headquarters Air Force.

Dr. Younger Comes to Materiel Division.

John E. Younger, Professor of Mechanical Engineering, University of California, Berkeley, Calif., on leave from the University for one year, reported July 1st in the Aircraft Branch, Structures Unit, for work on special research problems.

Lieut. Kemmer assigned as Structures Director.

Lieut. Paul H. Kemmer reported for duty in the Aircraft Branch on June 28th and was assigned as Director of Structures Development and Test Laboratory.

Experimental Telescopic Camera.

An experimental telescopic camera was fabricated at the Materiel Division for the purpose of obtaining photographs of the stratosphere balloon at various altitudes during flight. This camera has a 15-foot focal length lens giving an approximate speed of F/50.0. The lens is mounted in an aluminum tube 9 feet long and approximately 6 inches in diameter. The camera body is a case of a 4" x 5" Graflex speed graphic camera, mounted in the end of another tube 9 feet long and approximately 6 inches in diameter. The tubes can be telescoped together, forming a camera approximately 17½ feet long. The camera proper is mounted on a tripod specially constructed, having legs that extend approximately 11 feet. This permits the making of photographs from a vertical position. A minus blue filter is used in the lens and shutter speeds varying from 1/10th of a second to one second will be used.

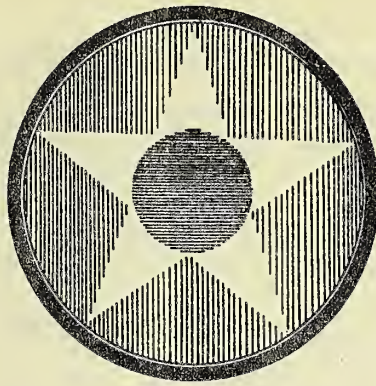
Various types of Panchromatic film will be used to obtain maximum contrast and fineness of grain under the various conditions. The plan was to carry the camera in a Type C-8 airplane to a point in the approximate path of the balloon flight. The airplane equipped with an all-wave radio set was to receive signals either from the balloon or from the re-

broadcast giving the location of the balloon at various altitudes, after which the airplane was to be flown somehead ahead of the path of flight and as nearly under the balloon as possible, landing facilities permitting, after which the camera was to have been set up and the balloon photographed. At an altitude of between 75,000 and 80,000 feet, it was expected that an image between 7/16" and 1/2" in diameter would be obtained. The camera is set up on the ground for taking the pictures.

Lieut. J.F. Phillips and George Magnus, designer of the camera, started from Wright Field when information was received that inflation of the balloon at the Stratocamp, Rapid City, South Dakota, had started, and were among those who sympathized with Captains Stevens and Anderson in the loss of the balloon, especially as it affected the test of the camera.

Floodlight Reflectors.

Initial tests have been completed and a report prepared on the problem of deterioration of reflectors in Types A-9 and A-9A floodlights. The results of the tests disclose that failures produced in the laboratory are not similar to those described in Unsatisfactory Reports submitted by service activities. It is probable that the investigation of this trouble will not be completed in the very near future, as additional data from all stations using these reflectors will be required. The investigation under way at present includes the possibility of using a metal reflector. If the deterioration of silvered glass reflectors cannot be overcome, such mirrors will offer a possible substitute. Use of such mirrors will increase the initial cost approximately 10%.



AIR CORPS

NEWS LETTER



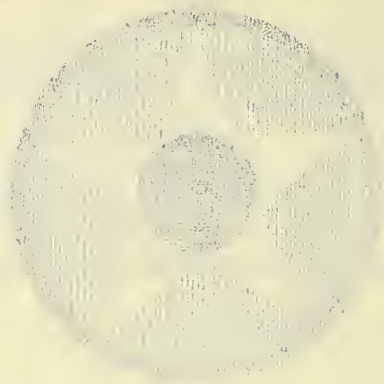
DUNNINGTON 7-30-35

ISSUED BY
THE OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT WASHINGTON, D.C.

AUGUST 15, 1935.

VOL. XVIII

NO. 15



AIR CORPS

RECEIVED

ISSUED BY

THE OFFICE OF THE CHIEF OF THE AIR CORPS
WASHINGTON, D.C.

August 10, 1950

1000

1000

Information Division
Air Corps

August 15, 1935

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

AIR CORPS ENGINEERING SCHOOL GRADUATION

By the Materiel Division Correspondent

GRADUATION exercises of the Air Corps Engineering School were held at the Wright Field Auditorium on July 31st, Brigadier General A.W. Robins, Commandant; Major Frederick M. Hopkins, Jr., Assistant Commandant; the Faculty Board, consisting of Lieut.-Colonels Frank D. Lackland, Harold A. Strauss and Oliver P. Echols; prominent Dayton citizens; the graduating students, their families and friends; and Wright Field personnel being in attendance. General Robins delivered the address and presented the diplomas. He said in part:

"I can think of no happier occasion in the experience of an Army officer than the day when he is handed a diploma showing that he has graduated from one of our many educational institutions. I am sure most of us look upon graduation exercises as evils connected with tight uniforms, hot temperatures, and large doses of 'hot air.' Having in mind numerous occasions when I have sat with the graduating class and hoped the speaker would make it snappy, I have decided to save you as much as possible this morning by reducing the 'hot air' to a minimum.

Of all the schools we have in the Army, in my opinion, there is none which carries with it any more distinction or gives to the student any more valuable education than does the Air Corps Engineering School. The student body is made up of men who have shown their enthusiasm for matters pertaining to our profession and have indicated their willingness to follow a career of hard study and hard work. When an officer has made application to be sent to the Engineering School, his ability and character are very carefully scrutinized by members of the faculty and by the Chief of the Air Corps, and his acceptance as a student is a compliment in itself. We are always assured that those who enter the Engineering School, whether they are assigned engineering duties within the Materiel Division, or elsewhere, will be of valuable service to the entire Air Corps.

I suppose you have all read extracts from the proceedings of the Special War Department Committee and the Howell Commission. In both of these proceed-

ings there has been emphasized the recommendation that those officers of our Air Corps who are valuable from an engineering, procurement, or supply standpoint should continue their flying experience even after they have become incapacitated, for one reason or another, to act as pilots, or even as good observers. I am bringing this matter to your attention this morning to bring out the great advantage the position of a valuable engineer has for officers of the Air Corps. In the proceedings of the War Department Special Committee it is also provided that those officers who no longer are valuable from a flying viewpoint and who are not experts in engineering or procurement or supply, should be retired or transferred to some other branch of the service.

Every officer in the Air Corps faces the time when he will find himself of no value from a flying viewpoint. When that time arrives, it will be of great comfort to you officers who graduated from the Engineering School to feel that you can still carry on and do extremely important work for the Air Corps until your age of retirement. I would therefore advise each and every one of you to keep this fact in mind and to take advantage of every opportunity that may present itself to improve yourselves as engineers of the Army Air Corps.

I extend to you the very best wishes for success from the Commandant, the Assistant Commandant, and members of the faculty of the Air Corps Engineering School."

The following student officers received diplomas and have been assigned at the activities following their names:

- 1st Lieut. Laurence C. Craigie to the Aircraft Branch, Wright Field.
- Captain Harrison G. Crocker to Maxwell Field, Ala.
- 1st Lieut. George V. Holloman to the Equipment Branch, Wright Field.
- Captain Reuben C. Moffat to Rockwell Field, Coronado, Calif.
- 1st Lieut. James F. Phillips to the Philippine Islands.
- 1st Lieut. Russell E. Randall to Kelly Field, Texas.
- 1st Lieut. John W. Sessums, Jr., to the Fairfield, Ohio, Air Depot.

V-6844, A.C.

AVIATION TRAINING IN CHINA

The magazine ASIA for August publishes an interesting article by Wilbur Burton on the development of aviation in China.

Touching on aircraft equipment, Mr. Burton states that China today has a total of probably about 500 airplanes, but not all are in Nanking hands, and many that have become either obsolete or of no use save for training pilots. Outside of Nanking, the only air force of any consequence is that of Canton, which has a fleet of about fifty fully equipped fighting planes and sixty first-class military pilots.

Canton now has seven American air advisers, and development there is still entirely under American auspices. The eighteen Americans still in Nanking's service, including Lieut.-Colonel John H. Jouett, U.S. Army Air Corps Reserve, and ten flying instructors and five mechanical instructors, are all in Shienchiao. Their contracts, it is stated, expire on June 1, and at that time Colonel Jouett will return to the company which granted him three years' leave for what he must regard as the greatest adventure in his eventful life as a pioneer of the air. For the Central Aviation School that he developed from one ramshackle hangar and a small, bumpy field into an institution that in some respects is the most modern of its kind in the world is easily the most dramatic and significant aspect of China on wings.

When Colonel Jouett took charge, Mr. Burton states, Nanking had two hundred more or less - mostly less - trained aviators. All were required to take a "refresher" course at the school, and when the course was completed one hundred and fifty had failed, or "washed out," in aviation idiom. Then began the process of making pilots out of youths who before entering the school have never seen an airplane save from a distance, and usually can neither drive an automobile nor tighten a nut on a bolt. For it is necessary to select young men with at least a high school education - and education and working with one's hands have always been mutually exclusive in Chinese civilization. Only a few of the most modernized schools combine books with machines. Recently, aviation has been publicized as the salvation of China, so it appeals greatly to the youth of the land, with the result that there has been no dearth of applicants for air training.

The educational requirements at Shienchiao, which are somewhat lower than is the case in the United States where virtually only college graduates are now accepted for aviation training, fit in admirably with Nanking's need of class consciousness in its air force. A high school education in China means

that a youth comes from at least a fairly well-to-do family; for there is no free education.

From the beginning, rigorous American methods were adopted by Colonel Jouett, and experience has shown that the results are practically the same in China as in the United States. Out of every 100 applicants for admission, only 15% pass all tests for entry and, of those who enter, one-half "wash out." These figures are almost precisely the same as in American military aviation schools. Only in the beginning, according to Mr. Burton, do Chinese flying students show any inferiority to American students. Knowing nothing about any machines which even resemble an airplane, the average Chinese student cannot "taxi" in a straight line when he begins training. Ten hours are usually required to teach just that, while the average American student knows instinctively how to "taxi" straight from previous experience with either automobiles or bicycles.

But once the Chinese learns to go in a straight line, his progress is rapid. In dead reckoning navigation - that is entirely by instruments - the American advisers in Shienchiao rate the Chinese even ahead of the Americans. Their enthusiasm for their work is probably greater than that of American students because they feel themselves to be the advance guard of a New China. They are also more intensely serious, doubtless for the same reason; the first student who was "washed out" committed suicide, and the students often shed tears when, in conformity with an old American training custom, they are forced to wear a brown derby all day on the "line" for "pulling a boner."

In resourcefulness and "keeping their heads," Mr. Burton states, the Chinese students appear fully equal to Americans. A little story will illustrate this. A student was forced to "bail out" in his parachute over Hangchow Bay after his plane collided with another. On his way down, he decided that his shoes would interfere with swimming; so he pulled them off. He then reflected that, if and when he swam to shore, he would need his shoes to walk back to the school; so he put them in his pockets. After landing and extricating himself from his parachute, he found the current too strong for him, whereupon he noted that the top of the parachute still contained a large amount of air, thus floating on the water. So he made a water-wing of it by tying a sock around the base and then, balancing himself prone upon the top, paddled ashore. Three hours later he walked into the school with the parachute under his arm.

Although the Chinese display instinctive ability as flyers, training them in

the care of planes has been much more difficult. Like all industrially backward peoples, they apparently regard a piece of machinery as something that will last forever without any care. Also, the Chinese have not taken so kindly to the impersonal ruthlessness of Americans in "washing out" the incompetent. Otherwise, the Central Aviation School today could be - and it largely is - operated by the Chinese whom Colonel Jouett and his assistants have trained.

One minor difficulty that more amused than bothered the Americans in the early days of the school was finding Chinese workmen who were willing to revise their diet to conform to the unique requirements of the workshop where the linen covering of wings is repaired. The covering, in order to become taut, must be painted with a vile-smelling banana-oil solution, constant contact with which causes a chronic stomach ailment, unless a quantity of milk is

drunk daily. Now, milk in any form is practically an unknown item in native Chinese cuisine, and it took some time to obtain workers who were willing to consume it regularly as their bit toward the air progress of their country.

Discipline in Shienchiao is, in some ways, more severe than in American or other western aviation schools. The New Life Movement has been invoked to prohibit smoking. Military drill is stern and regular. Little leave of absence is granted. The students are on duty eleven hours a day six days a week with considerable night flying in addition.

Up to the end of 1934, the school had graduated 150 students - which is the total number of Nanking's fully trained pilots. Meanwhile it has been built up, in both equipment and efficiency, to a standard unsurpassed anywhere. Much of the equipment is more modern than that of American schools. It can accept 200 students every six months for a year's course, which means the graduation of 200 a year since half will "wash out."

---00---

IMPROVEMENTS AT THE MIDDLETOWN AIR DEPOT

By the News Letter Correspondent

Air Corps officers who have recently renewed acquaintance with the Middletown Air Depot after a lapse of two years or more never fail to express their gratification at the many improvements which have been made during the past two years. The allotment of approximately \$1,650,000.00 of P.W.A. funds in 1933 made possible the construction of sorely needed buildings to replace those constructed during 1917 and 1918 and the improvement of other buildings and utilities, as a result of which the Middletown Air Depot now not only has an appearance that lends credit to it as a modern Army Air Corps establishment, but is in a position to operate even more efficiently than has been the case in the past.

When the Middletown Air Depot was established in 1917, it operated only as an Aviation General Supply Depot. The buildings were of the typical war-time frame construction, with the main supply warehouses as the central structure. In 1925, when the Engineering Department was added to the Depot, the Air Corps took over the Ordnance Depot, which adjoined the Air Depot on the west, and established an engineering shop in one of the old Ordnance warehouses, a building of wood and tile construction. This building, with the addition of three 110-foot hangars, which were erected to house various engineering activities, has served as the main shop building up to the present time. This building, a warehouse adapted to use as a shop, is poorly lighted, difficult to heat during cold weather, and

sometimes unbearably hot during the summer, but through it in the ten years of its existence as a shop have passed approximately 1,000 airplanes and 2800 airplane engines of all types. Now it has about reached the end of its existence as such, and the engineering activities are about to be moved into a new building of the most modern design, of steel and brick construction, with a layout that will permit greatly increased efficiency of the Engineering Department. The new building, having overall dimensions of 850 ft. by 375 ft., has a production capacity of 40 airplanes and 100 engines per month, given the proper number of employees, working 44 hours per week. The new building is well lighted, well ventilated, and can be heated comfortably in the coldest weather. Its layout is such as to permit straight line production, with back-tracking eliminated, and it will contain all the modern equipment and machinery necessary to the efficient overhaul and repair of Air Corps equipment.

This new building is located on the north edge of the flying field where it is in reasonably close proximity to the Administration Building and the supply warehouses. It is expected that this new building will be supplemented by the addition of two hangars, an Operations Office, a dope shop and an engine test building, for which funds have been requested. When these buildings are completed the Middletown Air Depot will have a complete modern group of structures for the Engineering and Oper-

ations Departments.

The main warehouse of the Depot Supply Department has been greatly improved by replacing the original wooden walls with brick, which has the effect of converting this warehouse into a permanent building. Other improvements to this building have been accomplished and additional improvements are planned as funds become available in the future. It is also hoped that the hollow tile walls of the two auxiliary supply warehouses can be replaced by brick as has already been done on the Quartermaster warehouse.

Depot headquarters which for many years occupied space in the main supply warehouse, has been transferred to a handsome new Administration Building, which is located on elevated ground at the head of the road leading to the hangars and new shops. In addition to Depot Headquarters, this building also houses the Quartermaster Office, the Constructing Quartermaster's Office, Signal Office, Radio Section, telephone switchboard and the Dispensary, and still has ample space in the basement for storage purposes or office expansion should the need arise.

The comfort of the personnel was not forgotten during this construction period, as new quarters were provided to accommodate fourteen officers and two warrant officers. These quarters, two single sets and six sets of double quarters for officers and one double set of warrant officer's quarters are of standard design and construction and are a great improvement over the small, dark frame buildings that had been occupied by officers for several years in the past. In close proximity to the officers' quarters is the new officers' mess building, a handsome brick structure that adds to the recreational facilities of the post. Present plans contemplate the development of a recreational area near the officers' quarters which will include a swimming pool, tennis court, skating rink and children's playground that will add to the appearance as well as the utility of the area. Plans also contemplate the removal of the group of old shop buildings that are at present in the quarters area as soon as they are vacated, and the west end of the reservation will be used entirely for residential and recreational purposes.

A modern fire station with space for fire trucks on the first floor and living quarters for the fire fighting personnel on the second floor; a modern central heating plant; new roads and the reconstruction of old roads and numerous other improvements complete the picture of the first phase of the construction program at the Middletown Air Depot.

Plans for future work in addition to the new construction already mentioned include a comprehensive grading and

landscaping program, the removal of buildings of war-time construction no longer needed, the erection of ornamental gate posts and gates at the two entrances to the reservation, and many other minor projects which will result in placing the post in general in excellent condition.

The personnel assigned to the Middletown Air Depot includes eight Air Corps officers, two Quartermaster Corps officers, one Signal Corps officer, the Contract Surgeon, four Warrant Officers and thirty-five enlisted men, of whom twenty-five are assigned to the 2nd Transport Squadron. A total of four hundred civilians are employed.

---oOo---

36TH PURSUIT COMPLETES GUNNERY PRACTICE

The 36th Pursuit Squadron returned to Langley Field, Va., July 26th, from the Aerial Gunnery Camp established at the National Guard Airport, Virginia Beach, Va. The organization moved into the field on July 12th by air and motor transportation. Owing to heavy rains, the gunnery practice did not commence until July 16th. From then on it continued until July 25th, the daily schedule of firing being from 5:00 a.m. to 9:30 a.m., after which daily maintenance by ground crews was performed on airplanes, leaving the afternoons free for recreational activities, such as baseball, volley ball and surf bathing.

The camp site, about 2½ miles from Virginia Beach, was ideally situated.

---oOo---

11TH BOMBARDMENT SQUADRON CELEBRATES

The famous Juggs organization, known officially as the 11th Bombardment Squadron, celebrated its 18th anniversary on August 2nd in an organization picnic at Bodega Bay. Although the 11th saw its beginning as a war baby back in 1917 on June 26th, August 2nd was the first open date that could be taken, as June and July were too full of flying training for the Hamilton Field bombers.

In the World War this Squadron participated in 32 bombing raids and received official confirmation for 13 victories. Major Arthur G. Hamilton of Arctic Patrol fame commands this intrepid Squadron.

---oOo---

LONG FLIGHT BY INSTRUMENTS ALONE

In a flight of over 400 miles and four hours of actual time, Capt. Charles G. Williamson flew blind with the hood over the cockpit between Hamilton Field and Clover Field, Santa Monica, Calif. Lieut. Edward W. Virgin, Air Reserve, accompanied him as the emergency pilot. Without one outside observation until directly over Clover Field, Capt. Williamson flew only by instruments and checks on them afforded by the radio. "beams."

V-6844, A.C.

JOINT MANEUVERS OF 15TH OBSERVATION SQUADRON AND 61ST ANTI-AIRCRAFT UNIT

Approximately one year prior to the joint maneuvers recently conducted by the 61st Coast Artillery (Anti-Aircraft) and the 15th Observation Squadron, Scott Field, Ill., Lieut.-Colonel Charles B. Meyer, Coast Artillery, and Major William C. Goldsborough, Air Corps, respective commanding officers of these two units, began working for authority to conduct these maneuvers. Success attended these efforts and careful planning, and on May 10th, at 4:00 a.m., the ground forces of the 15th Observation Squadron departed for Fort Sheridan, Ill., - a convoy of 21 vehicles - there to join the Fifteenth's Air Force, consisting of 9 Observation planes and one Ford Cargo plane, which took off from Scott Field at 10:00 a.m. the following day.

The arrivals at Fort Sheridan of the air and ground force was a well executed problem in logistics in that they were simultaneous almost to the minute.

The accommodations at Fort Sheridan were very satisfactory, the officers being billeted in General Parker's old home and the enlisted men tented on the C.C.C. grounds. A C.C.C. mess hall was used for the mess of both officers and enlisted men.

The training of these two units was definitely started the following day, particular attention being paid to field training and logistics. From May 11th to the 22nd, tracking missions, both day and night, machine gun and 3-inch gun tow target missions were carried out, and final plans for the joint maneuvers were completed.

At 7:15 a.m., May 22nd, the airplanes and a convoy of trucks from the 61st C.A. (AA) and the 15th Obs. Squadron departed for the Milwaukee County Airport, Milwaukee, Wis. The planes arrived at 8:00 a.m., and the convoy three hours later. Practical field problems were carried out on the move, the Air Force becoming a portion of the defending Red Forces and the convoy the attacking Blue Force. In compliance with published field orders, the objectives of the Red Force were special missions in observing, photographing, bombing and strafing the Blue Force enroute. The Blue Force which, to escape detection, had separated into two units, one taking an inland route and the other a shore line route, simulated war time conditions by issuing sealed orders at predetermined points, which notified various sections of the convoy that they had been bombed or gunned, and the action of the persons involved and the time for such action was noted and later discussed at critique. The final decision at the critique of the results of the problems connected with this particular move was: The Red Forces suc-

ceeded in locating and destroying the inland part of the convoy, which consisted of guns, searchlights, sound locators, and prime movers. The supply train escaped detection.

Cooperative missions were carried out at the airport the first two nights, and firing and tracking for the remainder of the stay were done at Cudahy Park, south of the city along the shore line.

At 3:00 a.m. Saturday, May 25th, the first contingent of the convoy, consisting of Air Corps gas, supply and radio trucks, departed for Kewaunee, Wis., followed at 5:35 A.M., by the planes and the remainder of the joint convoy. Specified problems were again carried out in conformity with published field orders, the Air Force becoming the Red Forces with the same objectives as before against the convoy. The attacking Blue Force, which had separated into three distinct units, was theoretically totally and completely destroyed.

That evening a formal reception was tendered the officers and enlisted men by the townspeople, the enlisted men being entertained by the American Legion.

A great deal in cooperative work was accomplished at Kewaunee, the camp being located at a strategic point for ideal firing from the shore line. Missions in machine gun and 3-inch gun firing were carried out, and possibly at no place on the journey were the townspeople so enthusiastic and interested in the work of these two branches.

Camp was broken on Thursday, May 30th, and the Air Corps ground force moved out at 6:30 a.m., to establish contact with the planes at Blaney, Michigan. At 3:00 a.m. the following day, while at Blaney, a summer resort, the entire Squadron was turned out to help fight a fire which eventually destroyed the Inn.

The 61st C.A. (AA) convoy left at a later period in the day and bivouacked at Brevort, Mich., north along the lake from St. Ignace. A special problem was promulgated here for the morning of the 31st. One gun was set up and five planes were dispatched from Blaney to work out this problem. One airplane ferried Colonel Meyer over the bivouac, one laid a smoke screen, and three flew in a column of varied altitudes towing targets. The other plane and convoy departed two hours later for Cheyboogan, Mich., there to join with the planes that had been working with the 61st.

The convoy crossed the Straits of Mackinac during the day of the 31st, this being the first time such a large and heavy force had been carried across a body of water by commercial carriers without interrupting regular service and without the need of strengthening the carriers. The move was completed and all units were in camp at Cheyboogan

0:00 p.m. During the stay at Oney, bogan there were no operations with the exception of the display of equipment.

On the morning of June 3rd, all units departed simultaneously for Traverse City, Mich., with no special objectives being worked out, as the Air Corps became a supporting unit of the Blue Forces. Prior to the departure the convoy, consisting of 113 pieces, lined up on the highway for aerial photographs.

No camp was pitched at Traverse City, the units being billeted in the buildings at the Fair Grounds and all missions, namely, tracking and machine gun firing, were done at Northport along the shore line.

At 6:00 a.m., June 6th, the entire command moved out for Muskegon, where intensive training was begun in earnest, the Air Corps portion consisting of night navigation, formation, tracking and towing for the 61st C.A. (AA). The 61st completed all their work on machine guns and three inch guns and record searchlight drill.

At 3:50 a.m., June 14th, the Air Corps convoy pulled into position, and ten minutes later started on the last leg of the journey to Scott Field, via Chanute Field, Rantoul, Ill.

"It is believed," says the News Letter Correspondent, "that a record was set on this march. The squadron convoy marched a distance of 473 miles in 16 hours, which is an average of $29\frac{1}{2}$ miles per hour. From Chanute Field to Scott Field the average was 38 miles per hour for a distance of 172 miles.

All things considered, this entire maneuver was a complete success, and it is believed that joint exercises of this nature should be carried out by these two arms of the service more frequently."

---oOo---

SQUADRON MANEUVERS IN OREGON

Major Harold D. Smith, commanding officer of the 31st Bombardment Squadron, Hamilton Field, Calif., recently flew with Major Delmar H. Dunton to Corning and Medford, Oregon, for the purpose of selecting a camp site for the independent squadron maneuvers which his organization was scheduled to start approximately August 19th. Major Devereux M. Myers also flew a Martin B-12 Bomber on the same mission. As commanding officer of the 70th Service Squadron, Major Myers was vitally concerned that a site be selected possessing good water and sanitation. A detail of men from his Squadron was scheduled to proceed to the site selected and pitch the camp before the landing of the flyers.

---oOo---

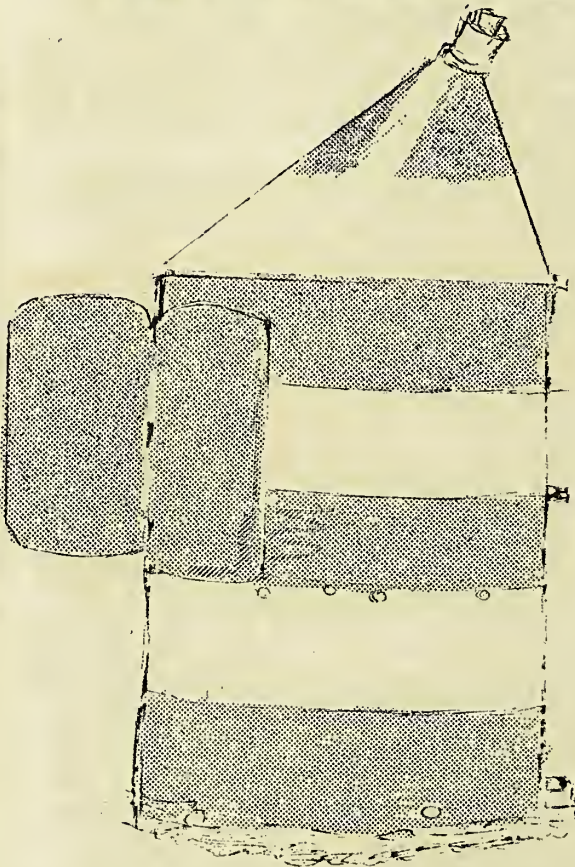
ACTIVITIES OF 20TH BOMBARDMENT SQUADRON

Operations for personnel of the 20th Bombardment Squadron, Langley Field, Va., have been very much curtailed during the month of July. However, the new Cadets assigned to the Squadron have been concentrating on instrument flying, and five have already qualified according to the provisions of Air Corps Circular Letter 50-1.

Immediately on its return from flying the West Point Cadets at Mitchel Field, N.Y., the Squadron furnished five B-6A airplanes, sixteen pilots and six enlisted men to supplement the 96th Bombardment Squadron and 59th Service Squadron in their maneuvers at Richmond, Va., from July 10th to 18th, last. From July 21st to August 3rd, the Squadron planes have been used by the Reserve officers ordered to Langley Field for two weeks' active duty.

---oOo---

A NEW TYPE OF CAMERA OBSCURA



A new type of camera obscura, which resembles a sheet iron incinerator but can be used both as a camera obscura and a dark room in the field, is being tested at Hamilton Field, Calif. With this camera which is a steel turret which can

Continued on page 9.

AMATEUR RADIO STATION AT WHEELER FIELD

During the latter part of May, the Amateur Radio Station K6MEG of the 18th Pursuit Group went on the air. Good results were obtained from the start. At first only short contacts were made to get acquainted with fellow amateurs. Since then, a Radio Club has been formed, consisting of Lieut. Curtis E. Le LeMay, Corporal Bennette O'Bannon, Privates Eugene F. Bryde and Joseph H. Walsh. All hold amateur licenses. The station call letters are K6MEG.

Schedules are now being kept with W6HDV and W6GK at Los Angeles, and W6IGA in Oakland, Calif. KAIHR in the Philippines may frequently be contacted upon call. Reports from stations worked show plenty of signal strength, and as time goes on and improvements are made better results are anticipated.

This station is now a member of the American Radio Relay League and has made application for Official Relay Station, and in time will try to get into the Army Amateur Relay Service. Messages are now being sent to Relay Stations on the west coast, and since June 3, 1935, 332 messages have originated from this station.

This station is a private enterprise which, in the event of an emergency, may be operated in conjunction with some of our Signal Corps equipment. Its greatest value is the training of personnel and stimulating interest in radio.

The operating hours are from 6:00 p.m. until the wee small hours of the morning, nearly every night.

"All army personnel operating amateur stations on the 40 meter band are requested to try to contact us," says the News Letter Correspondent. "Our crystal controlled frequency is 7235 kilocycles. Air Corps personnel on the mainland desiring to communicate with friends on foreign service in Hawaii may do so free through the medium of the American Radio Relay League."

---oOo---

TRAINING OF RESERVES AT LANGLEY FIELD

During the period July 21 to August 3, 1935, the 49th Bombardment Squadron was engaged in the training of Air Corps Reserve officers on two weeks' active duty at Langley Field, Va. Thirty-four Reserve officers reported for duty and were immediately given a physical examination, issued flying equipment, and then checked for flying ability. These officers were "checked off" in Pursuit, Bombardment, Primary Training and Basic Training type airplanes, including airplanes equipped for instrument flying. Flying consisted of local flights, short cross-country flights and one cross-country flight of 300 miles for each

group. A few short lectures were included in the course, a particularly interesting one being given by Captain J. S. McDonnell, Air Reserve, who is Project Engineer at the Martin Aircraft Factory. It is estimated that each Reserve officer received approximately 20 hours' solo time during the course of this training.

---oOo---

NEW CONSTRUCTION PROJECTS AT KELLY FIELD

An appropriation of \$524,350.00 has been received at Kelly Field, Texas, for the purposes listed below:

- \$ 68,250. for gas and oil storage and distribution.
- 52,400. for a miniature range.
- 170,000. for paved aprons and runways.
- 160,000. for improvements to landing field and building area.
- 3,000. for machine gun butts.
- 50,700. for general repairs to buildings and utilities.

Surveyors and other personnel have been at work for the past week completing the preliminary stages of construction.

"We hope," says the News Letter Correspondent, "that this is preliminary to the long-expected new construction of Kelly Field."

---oOo---

CLYDE PANGBORN VISITS BOLLING FIELD

Recently, Clyde Pangborn, in his Upperco Burnelli airplane, arrived at Bolling Field, D.C., for the purpose of demonstrating his new airplane to the Assistant Secretary of War, Hon. Harry H. Woodring, and several members of Congress. This airplane is the one Mr. Pangborn intends to use on his round-the-world non-stop flight. He intends to circumnavigate the globe, refueling in the air at three different points. Altogether he will fly approximately 18,000 miles.

It is understood that the airplane has a cruising speed of about 200 miles per hour. At the present time his airplane is still equipped with a number of seats. These will be removed and gas tanks installed. It is believed this flight will be undertaken sometime this month.

---oOo---

RESERVE OFFICERS IN TRAINING IN GEORGIA

Seventeen Air Corps Reserve officers residing in various Southern States spent a period of two weeks, from July 21st to August 3rd, in training as an Observation Squadron at Candler Field, Atlanta, Ga., under the command of Major James A. Meissner, of Birmingham, Ala., noted war-time pilot. A full training schedule was carried out, utilizing ten Observation and Training type planes.

Major Meissner holds the unofficial title of "Ace", being credited with 8 victories. He was awarded the D.S.C. and the Croix de Guerre.

BOATING IN THE PHILIPPINES
By Private Robert B. Gnagey

One of the first questions asked by new men upon their arrival in the Philippines is, "What can we do for diversion?" Recently the News Letter carried an article on hunting, and the present article is submitted in an effort further to enlighten the men who are contemplating a tour of duty in the Far East.

Someone remarked recently that on Sundays half of Nichols Field could be found in the vicinity of The Motorboat and Gun Club. This is almost true. Situated on the site of what was formerly Camp Tomas Claudio and housed within one of the old hangars, this club offers a number of healthful sources of recreation, diversion and generally happy week ends.

Manila Bay is an ideal spot for boating, and especially Bacoar Bay, on which the Motorboat and Gun Club is situated. Here the visitor will see a wide variety of craft. There are the swift little outboard racers, the large outboard speedsters, and the 24-foot class motor cruisers. The club basin is literally dotted with the sails of the native type sailing bancas, the sailing dinghies and the larger sailing cruisers. Frequently there are races in all classes in which there are many entries. Considerable interest is evinced in the outcome. Almost all of the boats are owned by personnel from Nichols Field.

Surf bathing is very popular, and the Boat Club maintains an ideal beach. It is not unusual to see several hundred people enjoying this sport on a Sunday morning. Aquaplaning is steadily gaining popularity. The club bancas are in continuous service, carrying bathers to and from the diving barge which is anchored about one hundred yards off shore.

While the water is the prime interest, it does not attract everyone. The rifle and pistol range claims a goodly following, too. Last year the Far Eastern Olympic shoot was conducted on this range. Many of the Air Corps personnel are steady patrons of the range, and there are some excellent records made each year. Archery has lately become quite popular, and Sunday mornings you will see many nimrods stringing their bows for a round of Archery Golf.

During the rainy season this club resembles a prosperous ship building factory. Most of the boats are taken inside the hangar for overhaul, and many men use this season to build new boats. Lumber is comparatively cheap in the Philippines, and most of the boatmen in this club have learned that it is not too difficult to build their own craft. This affords splendid pastime and healthful recreation during the incle-

ment weather.

The cost of these boats ranges from thirty dollars up to three hundred, depending upon the size and rigging. Membership is well within the means of any enlisted man. The club is an easy twenty minutes walk from Nichols Field, and half this distance is along the beach.

To the new personnel coming to the Philippines it is suggested that aquatic sports furnish excellent diversion well within their means. Many men take annual trips in their own boats to neighboring islands, Mindoro being one of the favorite cruises. A trip up the Pasig River in a motorboat is one of the thrills no one should miss. And if you are seeking adventure, a trip across Manila Bay at night will certainly give you something to write home about.

---oOo---

TACTICAL SCHOOL VETERAN RETIRES

The 84th Service Squadron's veteran First Sergeant, John T. Wheatley, was retired from the Army on July 31st, at Maxwell Field, Ala., after serving the required thirty years of active service.

First Sergeant Wheatley was born in Montrose, Scotland, on May 15, 1879. He became interested in the Army at an early age and enlisted in the English Garrison Artillery, similar to our own Coast Artillery, in 1896, where he served for eight years prior to leaving for the United States. He landed at New York on Washington's Birthday, 1906, and within a few short months was back in the Army, although it was a different Army to him.

His first enlistment was with the 19th Company, Coast Artillery Corps, and he stayed with the Coast Artillery, although serving with different companies, until after the World War. He saw service in the Philippines from 1911 to 1912, and he left the United States early in 1917 for France, where he participated in four major engagements, serving with the Coast Artillery. His Victory Medal carries four bars, showing participation in the battles of Champagne-Marne, St. Mihiel, Meuse-Argonne and the Defense Sector. He returned to the United States, landing in New York again on February 4, 1919, and, following the expiration of his enlistment in the Coast Artillery that year, he reenlisted in the Quartermaster Corps, with which branch he served until 1927.

On January 11, 1927, he enlisted with the Air Corps Tactical School Detachment at Langley Field, Hampton, Va., and with his extensive Quartermaster Corps training and experience in supply, was assigned in charge of all School Supplies. When the Tactical School transferred to Maxwell Field, he accompanied it and served in his supply duties until shortly before his re-

tirement.

First Sergeant Wheatley is one of the few old-timers who has all of his Honorable Discharge certificates bearing the character "Excellent," and he has nine of them. All but three show his discharge as a noncommissioned officer.

Upon being asked what his plans were for the future, the veteran Top-kick stated he intends sailing next month for a round-the-world cruise, taking his good old time about it, and tho-

roughly enjoying life. After nearly thirty-eight years of active service in the two armies, he certainly earned his retirement. He stated that he plans on making his future home somewhere on the West Coast.

As a farewell gift, the personnel of the 84th Service Squadron tendered their veteran First Sergeant two gladstone bags and a picnic luncheon at Harriget Springs, Alabama, shortly before his retirement.

---oOo---

A NEW TYPE OF CAMERA OBSCURA

(Continued from page 6)

be revolved with the lens in the top at a 45 degree angle, a considerable range can be tracked on the graph paper below, approximately an area equal to the 100 foot circle in the bay. Bombs which are not dropped but signalled can be traced to an accurate certainty on the target. Checking of wind resistance in the Meteorological Bureau and with a known height makes the solution of the problem a simple one. Captain Charles G. Williamson is in charge of the 7th Bombardment Group armament at Hamilton Field since the illness of Major Lewis R.P. Reese.

An item which appeared in a recent issue of the San Francisco CHRONICLE regarding the above apparatus is as follows:

"Authorities at Hamilton Field, Marin County, have reached the end of their patience in telling those who visit the bombing base that the odd shaped structure near the landing field is not an incinerator nor is it an observatory.

This little striped turret which has aroused the curiosity of so many people is a camera obscura and is used as a basic part of the training of the army bombers.

In the little 'stack' on top of the turret, a wide angle lens is mounted. Beneath the lens a plane table is mounted.

A plate or map of the area is mounted on the plane table, the lens is swung around until the bombing planes are brought into focus, a predetermined target is marked on the map. As the plane in the air moves along the route, the operator in the turret marks its progress.

When the bomber brings the target into range, instead of releasing an expensive bomb or a heavy sandbag, as was the practice heretofore, he radios that he has fired. At that instant the operator of the camera obscura places a mark on the map, and if the bomber in the air has made the proper calculations for drift, windage, forward impetus from the plane and other extraneous factors, the mark on the map should coincide pre-

cisely with the target.

An invention of the staff at Wright Field, the camera obscura at Hamilton Field is the first to be tried by the army. If proven entirely satisfactory, this unit alone can save Uncle Sam many, many thousands of dollars annually, according to authorities.

---oOo---

BOMBING BY THE 35TH PURSUIT SQUADRON

The 35th Pursuit Squadron, Langley Field, Va., in addition to regular training, such as formation, night flying, etc., has dropped 75 live bombs. The bombing was done from 1,000 feet, as it was found in earlier tests that fragments rose as high as 800 feet. Due to the higher altitude, the first few bombs were over, but accuracy increased until the bulls-eye of the bombers' high altitude range was blown away.

---oOo---

STATION COMPLEMENT ASSIGNMENTS

The following-named officers of the Air Corps were, under Special Orders of the War Department recently issued, assigned to duty with the station complements at the stations as hereinafter indicated:

To Bolling Field, D.C.: Captains Charles M. Savage and Hez McClellan.
To March Field, Calif.: 1st Lieut. Ernest H. Lawson.

To Brooks Field, San Antonio, Texas: Major William C. Ocker, Captain John C. Kennedy.

To Selfridge Field, Mt. Clemens, Mich.: 2nd Lieut. Frank G. Jamison.

To Barksdale Field, Shreveport, La.: Captain Lloyd L. Harvey, 1st Lieut. Melie J. Coutlee, 2nd Lieuts. Daniel W. Jenkins and Robert M. Lee.

To Langley Field, Hampton, Va.: Colonel Charles H. Danforth, Captains Paul J. Mathis, Arthur J. Melanson, 1st Lieuts. David M. Ramsay and Edward A. Hillery.

---oOo---

The new Tee is now installed at Bolling Field opposite Headquarters and Operations buildings, and the News Letter Correspondent hopes it is flashy enough to draw the attention of visiting pilots.



Anent the emergency parachute jump on July 15th, near Seligman, Arizona, of the highest ranking member of the Caterpillar Club, Major-General George E. Leach, Chief of the National Guard Bureau, accounts thereof which appeared in different newspapers differed as to exactly what transpired which necessitated the General taking to his parachute and what his feelings and reactions were during and after the jump.

Here are the actual facts on this incident, taken from the official report rendered by General Leach to the Chief of the Air Corps. It illustrates at least one instance where a superior officer took orders from a subordinate and "liked it." General Leach states in his report:

"I jumped because I was ordered to by my pilot, Captain Charles M. Cummings, A.C., after the engine failed and burst into flames. The failure occurred over mountainous terrain where it was impossible to safely land the airplane. Later investigation of the engine revealed a connecting rod had given away.

I was fully conscious of the lapse of time after jumping. I waited an appreciable time before pulling the ripcord so as to be assured of clearing the airplane and to fall far enough away so as not to interfere with the pilot whom I fully expected would jump immediately. During the fall and until after the parachute opened I experienced a sensation of darkness which I later attributed to the fact that I was unable to see, probably due to the rapid descent and the effects of the centrifugal force when suddenly stopped by the opening of the parachute. Parachute appeared to open instantly, and as I jumped at an altitude of 10,000 feet above sea level I naturally drifted a considerable distance before landing. The elevation where I landed was approximately 6,000 feet. I attempted to control the landing by pulling on the shroud lines, but apparently with little success, and I landed in a deep blind gulch which had no outlet and was about three or four hundred feet deep. The territory in which I landed was rough uninhabited country, about 45 or 50 miles east of Kingman, Arizona. I walked about five hours before reaching a shepherd's camp. He having no telephone, went on foot to the nearest ranch about six miles away and secured an auto in which I was driven to Kingman, Arizona."

Since the last summary on the stand of the Caterpillar Club, which appeared in the previous issue of the News Letter, reports on two more emergency jumps were received, making the unofficial score at this writing 718 lives saved in this country by the parachute with a total of 754 jumps, 36 of them being repeaters.

The two candidates who recently rapped for admittance into the Caterpillar Club are 2nd Lieut. Douglas M. Cairns, Air Corps, and Lieut. (jg) Frank B. Schaede, U.S. Navy.

Lieut. Cairns was forced to "bail out" of an Attack plane on July 6, 1935, a short distance off Kepuki Point, Oahu, when he found that the control stick would not move to the left and the nose of the plane was dropping to the right. He tried to hold the ship level with the rudder, but the nose fell and the ship was in a vertical dive. Thinking the controls had jammed and realizing he had no control over the plane, he took to his 'chute, landed in the water and was picked up by a sampan.

Lieut. Schaede, while engaged in acrobatic training, found himself in an inverted spin and an embarrassing predicament. After a struggle to right the plane, accompanied by an appreciable loss of altitude, he jumped at approximately 2,000 feet, landing uninjured in the swamp on the edge of Peridido Bay, Fla. The plane went into a straight dive and hit in the swamp, near Eleven Mile Creek, burying itself up to the tail surfaces, wings and all. An interesting side light was the search for the plane by two pilots and mechanics from Squadron One. Having seen the parachute on the ground and no sign of life, these pilots beached their planes and went helter-skelter into the swamp and underbrush in search of the pilot who had jumped. The latter had walked off in another direction and finally reached a highway and safety. The rescuing party, especially Lieut. (jg) Lord and mechanic, struggled valiantly for four hours in an attempt to reach the object of their search. Other planes in the air finally directed them out of the wilderness. Their clothing had been virtually torn off and both suffered severe scratches from the underbrush.

---oOo---

HIGH ALTITUDE TEST FOR MARTIN BOMBER

Lieuts. B.R. Baldwin and J.E. Roberts, Air Reserve, and Sgt. H.J. Marth and Pvt. Wm. Haddox, all equipped with oxygen masks, soared in a Martin Bomber from Hamilton Field to a rather high elevation. Bulky fur-lined suits were also worn to combat the cold rarefied air. Guns and radio functioned perfectly on the test. This test in a 31st Bombardment Bomber was a part of the quarterly load inspection test.

B I O G R A P H I E S

MAJOR BYRON Q. JONES

The first Army flyer to perform acrobatics and the first deliberately to place an airplane in a tail spin and learn how to come out of it are among the various other flying accomplishments credited to Major B. Q. Jones, veteran Army pilot, who served all but eighteen months of his total commissioned service in the aviation branch.

Born at Henrietta, New York, April 9, 1888, Major Jones attended grammar school and high school at Rochester, N.Y. and, after pursuing a course of instruction at the Massachusetts Institute of Technology, Cambridge, Mass., for six months, he received an appointment to the United States Military Academy. Following his graduation from West Point, June 12, 1912, he was commissioned a second lieutenant and assigned to the 14th Cavalry, which was then stationed on the Mexican Border.

Detailed to the Aviation Section, Signal Corps, in November, 1913, Major Jones reported for duty as a student at the Signal Corps Aviation School at San Diego, Calif., where he learned to pilot the early 30 h.p. Wright pusher plane, also the Wright C-type pushers, land and seaplanes, and the Curtiss pusher and tractor type planes.

It was in a Curtiss, Model J, 85 h.p. tractor, and in a Martin, Model T, 60 h.p. tractor that Major Jones, in the winter of 1914-15, performed his first series of acrobatics. In the spring of 1915, he established the American duration record for a solo flight of 8 hours and 53 minutes in a Martin "T" plane, using Curtiss controls and equipped with a 60 h.p. Curtiss motor. This was considered the most meritorious flight performed by any Army pilot for that year, in consequence of which he was awarded the Mackay Trophy. Along about the same time, he established a duration record of 7 hours and 5 minutes and an altitude record of 7,500 feet, for pilot and two passengers, in a Burgess tractor, powered with a 70 h.p. Renault motor.

After serving for several months at Brownsville, Texas, with the aviation detachment operating with General Funston's command, Major Jones was assigned to the 1st Aero Squadron, commanded by Captain (now Major General and Chief of the Air Corps) Benjamin D. Foulois, and he served with this organization at San Diego, Calif.; Fort Sill, Okla.; and Brownsville, Texas. While at Brownsville, he and Lieut. Thomas DeW. Milling, observer, flying over the Rio Grande, were fired upon by machine gunners on the Mexican side of the river. This is believed to be the first time any aviators were subjected to gun fire while in flight.

Following the completion of a post-graduate course in aeronautical engineering at the Massachusetts Institute of Technology, 1915-1916, Major Jones, in March, 1916, was assigned to duty in the Aviation Section, Office of the Chief Signal Officer, Washington, D.C. In June of that year, he returned to the Aviation School at San Diego where, until June of the following year, he was in charge of aviation experimental and repair shops and also served in the capacity of test pilot and instructor in aeronautical engineering. He was promoted to the grade of Captain in October, 1916.

Major Jones' first fog flying experience occurred in January, 1917, while crossing the Sierras from San Diego to Calexico enroute with other aviators to search for Major Bishop and Lieut. Robertson, who were lost in the Sonora Desert. These two Army flyers took off from San Diego on January 10th, and were not heard from until five days later. For four days they walked in the wilds of Sonora, Mexico, without food or water. They were found on January 15th, more than 32 miles south of the border, by a civilian searching party.

During the War, Major Jones, from July to October, 1917, was in command of the Signal Corps Aviation School at Mt. Clemens, Mich., proceeding from there to Washington, D.C., where, until April, 1918, he was in charge of the Training Section, Air Division, Bureau of Military Aeronautics. After several months' temporary duty overseas, he returned to the Division of Military Aeronautics and was placed in charge of the testing and proving of aeronautical equipment, on which duty he continued to be engaged following his transfer, in August, 1918, to the Engineering Division at Dayton, Ohio. He was also in command of Wilbur Wright Field, now Patterson Field. From December, 1919, to October, 1920, he was on duty as Assistant to the Chief of the Engineering Division, following which he returned to Washington and was assigned as Chief of the Requirements Division, Supply Group.

Upon the completion of a two-year tour of service in the Philippines, where he was on duty as Air Officer of the Philippine Department, as well as Commanding Officer of the 4th Composite Group, Major Jones returned to duty in Washington, and from September, 1923, to March, 1925, he served as Assistant Chief of the Supply Division, and thereafter until February 1, 1926, as Chief of the Property Requirements Section of that Division.

Following duty as student officer at the Industrial War College, Washington, V-6844, A.C.

and at the Command and General Staff School, Fort Leavenworth, Kansas, he served from July, 1927, to August, 1928, as Air Officer of the 7th Corps Area, Fort Omaha, Nebraska. His graduation from the year's course at the Army War College, Washington, in June, 1929, was followed by a tour of duty for three years with the War Department General Staff. On June 1, 1932, he was transferred to Langley Field, Va., and placed in command of the 8th Pursuit Group, participating with this organization in the Command and General Staff exercises at March Field, Calif., in May and June, 1933. While at Langley Field, Major Jones was also temporarily in command of the 2nd Bombardment Wing, and early in 1935 led this organization in tactical exercises under field conditions at various localities in the 4th Corps Area.

During the operation of the Air Mail by the Army Air Corps, February to June, 1934, Major Jones commanded the Eastern Zone, with headquarters at Newark Airport, N.J., and later at Floyd Bennett Field, Brooklyn, N.Y. On March 2, 1935, he was assigned to his present duty as instructor at the Army War College.

In the World War, Major Jones held the temporary rank of Lieut.-Colonel, and he was transferred to the Air Service with the rank of Major on July 1, 1920. His total flying time to date is approximately 3,000 hours.

---oOo---

LIEUT.-COLONEL RALPH ROYCE

When it comes to flying under any and all weather conditions, Lieut.-Colonel Ralph Royce, Air Corps, has amply demonstrated that wintry blasts, snow storms, sub-zero temperature, etc., hold no terrors for him. A particularly notable flight he led while commanding the First Pursuit Group at Selfridge Field, Mich., was the "Arctic Patrol" in January, 1930, an event of major importance in the history of the Air Corps. The purpose of this flight was to demonstrate the feasibility of moving Pursuit units over long distances in mid-winter and to test the suitability of flying equipment under sub-zero weather conditions. The Pursuiters in their aerial trek from Selfridge Field to Spokane, Wash., and return, encountered real Arctic weather and experienced many hardships, and the success of this expedition was attributed by them to Col. Royce's inspiring leadership at all times, his tireless energy and his unfailing cheerfulness. His leadership of this flight won for him the award of the Mackay Trophy.

In February, 1935, Col. Royce again led the First Pursuit Group on a cold weather flight, the entire month being spent in the Northern States where snow and ice prevail during the entire winter season. A total of 21 officers and 25 enlisted men participated in this

flight, and the hardships encountered were many. During their flying operations, the airmen were overtaken by several blizzards and dust storms, and at times the temperature hovered between 20 and 28 degrees below zero.

Just six months before the cold weather flight last mentioned, Colonel Royce was flying a Martin Bomber in Alaska, and no doubt felt perfectly at home. He was one of the participating pilots in the Air Corps expedition of 10 Martin B-10 Bombers from Washington, D.C. to Fairbanks, Alaska, and return, July-August, 1934.

Colonel Royce was born June 28, 1890, at Marquette, Michigan. After graduating from the Hancock Central High School, Hancock, Mich., in 1908, he received an appointment to the United States Military Academy, and upon his graduation in 1914 he was commissioned a second lieutenant and assigned to the 26th Infantry, with which regiment he served for one year.

Detailed to the Aviation Section, Signal Corps, he was on duty as a student at the Signal Corps Aviation School at San Diego, Calif., from September, 1915, to March, 1916. He received the rating of Junior Military Aviator, with the rank of 1st Lieutenant, May 16, 1916. He served as pilot with the 1st Aero Squadron while this organization was with the Punitive Expedition in Mexico and when it was stationed at its Mexican border base, from March, 1916, to April, 1917. While this squadron was stationed at Columbus, New Mexico, he served for a brief period as Commanding Officer thereof, also in the capacity of Squadron Engineer Officer, Supply Officer and Adjutant.

From May 2 to June 5, 1917, Col. Royce served as Officer in Charge of instruction at the Signal Corps Aviation School at Memphis, Tenn., and then at Chicago. He then served for a month in the Office of the Chief Signal Officer in Washington, following which he was ordered to duty overseas, in command of the 1st Aero Squadron. He retained command of this organization until May 8, 1918, in the meantime serving also as Director of the 1st Corps Aeronautical School at Amanty and Commanding Officer of the 1st Observation Group.

Colonel Royce was awarded the Croix de Guerre from the French Government, with the following citation: "Commanding the 1st American Observation Escadrille, he insisted on making the first reconnaissance above the enemy lines himself. Gives to his pilots generally an example of admirable dash and intrepidity."

Following his relief from the 1st Aero Squadron, Colonel Royce occupied various responsible positions, such as Chief of Air Service, 1st Army Corps; Chief of Air Service, 3rd Army Corps; in the Office of Chief of Training Section, Tours; and Assistant Chief of Air Service, Zone of

V-6842, A.C.

Advance. He was promoted to Lieutenant-Colonel, September 12, 1918.

From October 21, 1918, to May 22, 1919, Col. Royce was attached to G-5, General Staff Headquarters at Chaumont, France. He then returned to the United States, and in July, 1919, was assigned to duty as Chief of Staff to the Air Service Officer, Southern Department, Fort Sam Houston, Texas. From February to August, 1920, he was Assistant Air Service Officer, Southern Department. His next assignment was as Commanding Officer of Carlstrom and Dorr Fields at Arcadia, Fla., and as Commandant of the Air Service Pilots' School at the first-named field. When flying training was discontinued at Carlstrom Field and the Air Corps Primary Flying School was established at Brooks Field, San Antonio, Texas, Col. Royce was assigned as Commandant thereof, and he remained at Brooks Field until his transfer, in September, 1926, to Langley Field, Va., for duty as student at the Air Corps Tactical School. His graduation therefrom the following year was followed by another year of duty as a student at the General Service School at Fort Leavenworth, Kansas.

Col. Royce assumed command of the 1st Pursuit Group at Selfridge Field, Mich., June 20, 1923. As commander of this noted Air Corps organization, he participated in the Command and Staff Exercises at Mather Field, Calif., in the Spring of 1930.

Following a tour of duty with the War Department General Staff, from May, 1930, to August, 1933, he was assigned as student at the Army War College and, upon graduation, returned to Selfridge Field and once more assumed command of the First Pursuit Group, being given the temporary rank of Lieut.-Colonel during his occupancy of this position.

During the Air Corps Maneuvers in the Spring of 1931, under the command of General Foulis, when the First Provisional Air Division comprised 692 officers, 69 Flying Cadets, 643 enlisted men and 667 airplanes, Col. Royce was placed in command of the 22nd Observation Wing (Provisional) made up of detachments from various Air Corps National Guard Squadrons. The personnel of these detachments, as may well be assumed, had never before flown together. How well Col. Royce handled the difficult task of welding together this heterogeneous outfit in order to perform its allotted role in the maneuvers of the largest air force ever gathered together in this country for such a purpose may be gathered from the letters of commendation he received from the Chief of the Air Corps and the Chief of the National Guard Bureau.

Col. Royce is rapidly nearing the 4,000-hour mark in total flying time.

LANDINGS IN RAREFIED ATMOSPHERE

Seventeen Bombers of the 7th Bombardment Group landed at Wendover, Utah, on July 22nd individually to test their ability to "three point" in the rarefied mountain air of 5,000 foot elevation. They then gathered around the "Bird O'Prey," the command ship of Lieut.-Col. Clarence L. Tinker, Group Commander, and flew to Salt Lake City, Utah, to the 1st Wing concentration under the command of Brigadier General Henry H. Arnold. Tremendous ovations greeted them everywhere.

Some 30,000 people watched the enormous Bombers roar into Denver. Governor Ed C. Johnson, Mayor Benjamin F. Stapleton and Mr. George E. Tinker, father of Col. Tinker, greeted the commander of the 7th Bombardment Group, Hamilton Field, as he climbed down from his cockpit.

Frontier days were being celebrated in Salt Lake City, and contrast pictures showing the covered wagons and the new Army Martin Bombers covered whole pages in the newspapers. The Bombers returned to Hamilton Field on the afternoon of July 25th. Mechanics worked on them the whole night. The following morning the Group flew to March Field, Calif., for a review for the GHQ Inspector.

---oOo---

CADETS HANDLE THEMSELVES LIKE VETERANS

Flying Cadet Frank W. Brendle, while recently flying a B-6 Bomber from Langley Field, Va., with Flying Cadet Blaine B. Campbell as co-pilot, was forced down due to engine failure. A successful landing was made in a cultivated field near King George, Va. The Cadets availed themselves of the local hospitality until a new engine arrived the next morning at 11:30 a.m. The 59th Service Squadron dispatched a truck with crane mounted from Richmond, with the result that the plane was flown back to Langley Field the same day.

Cadets Brendle and Campbell are graduates of the July Class, Advanced Flying School, Kelly Field, and, says the News Letter Correspondent, are to be congratulated on their conduct in their first emergency while flying with a tactical unit.

---oOo---

Lieut.-Colonel C.L. Tinker, Commander of the 7th Bombardment Group, Hamilton Field, Calif., spoke to the Rotarians of Petaluma, Calif., recently, on the necessity of the United States developing and maintaining an adequate air force. The best defense is an effective offense. Our air forces should be capable of striking against these potential invaders before they have an opportunity to invade, is the Argus Courier's resume of the Group Commander's talk.

ACTIVITIES OF THE 15TH OBSERVATION SQUADRON

The 15th Observation Squadron, Scott Field, Belleville, Ill., has just completed the most successful training year since its organization, May 15, 1928.

A total of approximately 6,000 hours was flown by pilots of the organization during the period July 1, 1934, to June 30, 1935. This time included every phase of aerial training for Observation pilots, both as called for by the War Department training directive, and cooperative training as directed by the Corps Area. A total of 52 pilots received training by the 15th Observation Squadron during the training year, including officers of the Air Corps, Regular Army; Air Corps Reserve officers on extended active duty, inactive Reserve officers, and enlisted pilots.

In addition, 85 officers from line organizations were given a course of 15 hours' ground instruction and two to four hours each flying time on aerial observation.

Twenty-two crew chiefs were qualified as Gunners.

The squadron as a unit spent six weeks in the field at Camp Custer, Battle Creek, Mich., cooperating in maneuvers of troops of the Sixth Corps Area. Also, during May and June of this year, the entire squadron with all equipment operated with the 61st Coast Artillery (Anti-aircraft) in joint maneuvers around Lake Michigan, covering a distance of 2,000 miles, with their own motor convoy, maintaining ten planes and twenty-three pieces of motor vehicles for a period of five weeks with the squadron's own resources.

The period from January 10th to February 16th was spent at Chapman Field, Miami, Fla., on the aerial gunnery range and, out of a total of fourteen officers firing, twelve qualified as experts.

Academic training was also carried on for both the officers and enlisted personnel in radio, engineering, and photography.

In addition to the regular routine tactical training, the 15th Observation Squadron performs a weather flight each morning at 3:30 a.m., carrying meteorological instruments up to 17,000 feet, for the Weather Bureau.

ITINERARY OF THE 15TH OBSERVATION SQUADRON Muskegon, Michigan, to Scott Field, Illinois.

	<u>Place</u>	<u>Time</u>	<u>Distance</u>	<u>Elapsed Time</u>
Departed	Muskegon County Airport	4:00 A.M.	-----	:50
Entered	Holland, Michigan	4:50 A.M.	30 Miles	:50
Entered	South Haven, Mich.	5:55 A.M.	33 "	1:05
Entered	Benton Harbor, Mich.	6:30 A.M.	23 "	:35
Entered	Route #212	7:55 A.M.	34 "	1:25
Entered	Valparaiso, Indiana	8:55 A.M.	30 "	1:00
Departed	Valparaiso, Ind. (Refueled)	9:50 A.M.	-----	:55
Entered	Rt. #45 Ill. from Rt. #24	12:40 P.M.	98 "	2:50
Arrived	Chamute Field, Illinois			
	(Lunched and refueled planes)	1:45 P.M.	35 "	1:05
Departed	Chamute Field, Illinois	3:00 P.M.	-----	1:15
Arrived	South of Champaign, Ill.			
	(Shell Oil Station)	3:35 P.M.	17 "	:35
Departed	South of Champaign, Ill.			
	(Refueling trouble)	5:55 P.M.	-----	4:35
Arrived	Scott Field, Illinois	10:30 P.M.	172 "	4:35
Totals			472 "	18:30

The News Letter Correspondent believes that this march sets a new record for the Army, inasmuch as a delay of two hours was encountered at Champaign, Ill., in straightening out the procurement of gasoline. Actual time for the march was approximately 16 hours and 30 minutes.

---oOo---

RECRUITS SECURED FOR HAMILTON FIELD

A steady stream of recruits has been pouring into Hamilton Field as the result of the efforts of 2nd Lieut. James E. Roberts, Air Reserve; 1st Sgt. Michael Binder, Staff Sgts. Ray C. Clemons, Delno W. Ross and Sgt. Bryan I. Doughty. Most of these neophytes are high school graduates of nearby California towns.

RETIREMENT OF TECH. SGT. McPETER

Technical Sergeant Chester McPeter, of the 69th Service Squadron, Hamilton Field, Calif., retired on July 31st after 30 years of active service in the U.S. Army. The last 15 years of his service had been in the Air Corps. Sgt. McPeter plans to work a ranch in Novato, California, which he has purchased.

THE HAWAIIAN DEPARTMENT MANEUVERS
By the News Letter Correspondent

Numerous interesting incidents occurred in the 6th Squadron during the recent Hawaiian Department Maneuvers. When the 18th Composite Wing moved out of Wheeler and Luke Fields, the 6th Pursuit Squadron was split up, two flights being encamped at Haleiwa and the third flight at the Navy Mooring Mast.

Flight "C," Captain Bryant L. Boatner commanding, had a tough time of it at the Mooring Mast. The mast belongs to the Navy and is right in the middle of the old Cecil Hemp Plantation. The Navy bought the land from the Cecil's after they gave up making rope. After three days at the Mooring Mast, most of the men wished the Navy had given the land back to the Cecil's. The land is like Texas mesquite country - simply substitute Scorpions, Tarantulas and Centipedes for Rattlesnakes. The landing field is the smallest on Oahu, being about fifty feet wide and a thousand feet long. All the men in "C" Flight feel that they can land on the Navy Carriers without much trouble.

The difficult problem of camouflaging was handled very ably by Lieut. M.E. Bradley. All the ships in the squadron were camouflaged. Lieut. Bradley also used eight "IC" Pyramidal tents which he had cut up in strips and painted the color of the Hawaiian mesquite called Algeroba or Kiawe by the natives. The camouflaging was so good at both the Mooring Mast and Haleiwa that nothing shows up in photographs taken by Lieut. Fenander, 11th Photo Section, at an altitude of 3,000 feet.

When General Hugh A. Drum inspected the installations at Haleiwa, he walked around for a while and asked: "But where are the airplanes?" He had just walked not more than five feet from a plane so well hidden that he did not see it. Again, when Colonel Clark inspected the Mooring Mast, he climbed out of his ship and started in the wrong direction, the camp being so well concealed.

We used liquid oxygen in the field very successfully. The low temperature at high altitude, however, caused the water paint used as camouflage to peel off the metal parts, taking the airplane enamel with it and leaving the parts bare.

The 18th Pursuit Squadron took the field for maneuvers on June 25th, at 1:45 p.m., flying the aircraft and moving the ground echelon by motor. We at once began our work on camouflaging all material and equipment. Previous to our departure from Wheeler Field, we had completed the camouflaging of our planes, so that upon arrival in the field our main efforts were made to

hide our kitchen, pup tents for personnel, and all other equipment moved into the field. When completed, our position was most difficult to discern, either by air or ground observation. Naturally, we are proud that our efforts have been so successful. The work necessary has been a new and valuable practical experience for all from the lowest ranking private to and including the Squadron Commander.

Due to a last minute change in ration plans, the officers were forced to buy their own food, so they missed the experience of eating field rations had by the rest of the squadron. At midnight June 20th, our ration savings terminated until after the Department Maneuvers.

Another variation from our normal living was the use of pup tents, the lack of bathing and washing facilities and paradoxically to the last part the awakening from restless slumber by rain pattering into one's face.

It should be stated, however, that every one, enlisted and commissioned, took these inconveniences with a smile and carried on. Such spirit is the most pleasant of all observations. It makes one feel that no matter what happens, everything is going to be managed cheerfully and well by the 19th Pursuit Squadron.

The photographs of our position, taken from varying altitudes and angles, do not show a single one of our nine airplanes, this being due to the use of all available natural and artificial camouflage.

Our kitchen, due to the thorough cooperation of the entire squadron, was a large, airy and naturally camouflaged space, 24' by 12'. With one fairly large tree and a level area surrounding it to build on, an artificial grove of trees and bushes was built, camouflaging completely all kitchen equipment and personnel.

The olive drab and dark green paint on our planes made it comparatively easy to place them under the trees in such a manner as to make them practically invisible to aerial observation. The officers and men pitched their tents (Pup, G.I.) under the remaining unused foliage very effectively.

Constructively, we had strong points consisting of machine guns (30 and 50 caliber) and automatic rifle emplacements, backed with entanglements and sand bags. In order actually to surround our position with lines of fire from these strong points, it was necessary to constructively clear quite a large area and build trench high wire entanglements.

All our flying missions during these four days were at altitudes between 14,000 and 25,000 feet. Only one mission,

however, was flown at the highest altitude.

Most missions were to protect other types of aircraft in their missions. On several occasions, however, we came down from our high altitude and executed some damaging attacking on our ethereal enemy.

Friday, June 28th, was designated as the day for individual cooking. The entire squadron personnel, however, were much pleased when it was learned on that morning that the "war" was over and that we were to decamp at 3:00 p.m. It is difficult to work up enthusiasm for your own cooking after a rainy night.

With our new transportation, the return move was a small matter. After the spotting of trucks, fifteen minutes were used for the loading of equipment.

Needless to say, everyone was entirely happy to be once again back to more comfortable bunks and fewer mosquitoes.

The 75th Service Squadron, with the outbreak of "hostilities" in the current Department Maneuvers, fell heir to practically all jobs, other than Post Headquarters, on the field. All guard, including special airdrome defense, Transportation, Air Corps Supply and the various special duty jobs for the maintenance of the post was left almost wholly to the 75th Squadron. Although this interfered seriously with the normal function, the extra work was handled in a manner indicating the high morale of the organization.

Some very valuable experience was secured in handling liquid oxygen away from a regular airdrome, in camouflage of aircraft and installations and in refueling from five-gallon tin cans. These will be made the subject of comment for a future news letter.

---oOo---

ACTIVITIES AT THE HAWAIIAN AIR DEPOT

Air Corps Supply and Engineering officers of the Hawaiian Department assembled at the Hawaiian Air Depot recently for a conference in connection with the preparation of a questionnaire to be submitted at the annual Engineering-Supply Conference at the Materiel Division. The problems of the 18th Composite Wing were discussed in great detail and many valuable suggestions for the improvement of the services were offered. The conference was split up into two groups, Captain Edwin R. Page conducting the Engineering Conference, while Captain C.P. Kane had charge of the meeting on Supply matters.

The Fiscal Year closing June 30, 1935, was one of the busiest periods in the history of the Hawaiian Air Depot. The Purchasing Section of the Depot Supply Department was particularly active. Approximately \$225,000 was spent for the local purchase of supplies, which exceeded expenditures of the preceding year by more than \$100,000. This reflects the increased activity throughout the Depot. Commencing July 1, 1935, additional funds for the hire of civilian employees within the Depot were received.

The closing of records for this Fiscal Year discloses some very interesting figures insofar as the production of the Engineering Section of the Hawaiian Air Depot is concerned. During the Fiscal Year 1932, which was the year in which the Hawaiian Air Depot was officially organized, major overhauls were completed on a total of 48 airplanes, or an average of 4 airplanes per month. During the Fiscal Year 1935, just completed, this average was stepped up to nearly 6 airplanes per month, total figures for the year showing 70 airplanes overhauled. In addition, 9

B-4A airplanes, which were overhauled at the Rockwell Air Depot, were assembled and placed in commission by this Depot during the past Fiscal Year. It is estimated that if no new equipment is received requiring assembly, approximately 90 aircraft will be overhauled during the coming Fiscal Year.

While construction of the new Hawaiian Air Depot is eagerly looked forward to, experience has indicated that it may take a number of months or years before the Depot buildings will be actually available for occupancy. While a minimum of expenditure is being made within the Depot to care for increased activity anticipated within the forthcoming Fiscal Year, it will nevertheless be necessary to provide certain additional facilities in order to care for the increased business. This includes the construction of additional bins within the Depot Supply Departments and the rearrangement of stock. This work is going forward under the direction of Captain C.P. Kane.

Construction on the new Depot test block will soon be under way. This is expected to result in a big improvement over the present installation within one of the supply warehouses. Mr. R.C. Miller, Shop Superintendent of the Depot, recently returned from an extended trip on the Mainland, during which time he visited the Materiel Division at Dayton and secured a number of excellent ideas for use in Hawaii. Included within these projects was a plan to install a modern electric time-clock system which is expected to prove of great value in the matter of maintenance of records and cost accounts.

The morale of the Depot personnel is very high and everyone is pulling together in splendid fashion, due to the leadership of Capt. Page, Depot Commander.

LIGHTER THAN AIR ACTIVITIES AT SCOTT FIELD

The tactical operations of the Ninth Airship Company at Scott Field, Belleville, Ill., during the past year have been limited by several things. In the first place, this station is the only one in the Air Corps which is equipped to erect, test, alter and deflate the lighter-than-air craft now in service in the Air Corps. Secondly, this squadron has been limited in its operations by the lack of mechanized maneuvering equipment and, lastly, the few pilots who are assigned or attached to this squadron for flying must do test work in addition to completing a minimum course of tactical flying training.

The Ninth Airship Squadron has erected and tested the automatic damper control system for the TA type airship and is now testing a similar system for the TC-11 type airship. This squadron has also made tests of the reversible propeller for the power plants of the lighter-than-air craft.

The tactical operations of the squadron will be a different story in the very near future. The erection of the TC-14 airship and the mooring mast to be used with that ship will be completed in a few days. The TC-14 airship is similar to the TC-13, now at Langley Field. The following information about the two airships may be of interest to the Air Corps personnel:

	<u>TC-13 Airship</u>	<u>TC-14 Airship</u>
Type:	Internal suspension, closed car.	Internal suspension, closed car.
Volume:	350,000 cubic feet.	357,000 cubic feet.
Length:	232.25 feet.	235 feet.
Maximum diameter:	54 feet.	54 feet.
Power Plants:	2 P & W 375 h.p. each (GIR-1340D)	2 P & W 300 h.p. each (YI-GI-985A) 1 Martin 133 h.p. (YI-330-1)
Maximum speed:	75 m.p.h.	Over 80 m.p.h.
Fuel capacity:	1340 gallons.	1340 gallons.
Cruising range:	2500 miles.	2500 miles.
Radio equipment:	Only information available from photographs. Radio compass.	Transmitter: BC-191. Dynamotor, tuning units, control boxes and junction boxes. Receiver: BC-AD-219. Dynamotor coil units, control boxes and junction boxes. Inter-phone: Six position.
Cloud car equipment:	Independent powered windlass driven by a Johnson motor.	Equipped for sub-cloud observation with car operated by windlass in con- trol car driven by power take-off from the Martin engine. Communication by phone thru the telephone cone sus- pension cable.
Sea anchor equipment:	Under construction	Under construction.

The TC-14 should prove to be a better airship than the TC-13. It is hoped and expected, says the News Letter Correspondent, that the Ninth Airship Squadron will be able to approach in tactical training and operations the enviable record of the 19th Airship Squadron at Langley Field, Va.

---oOo---

TEMPORARY PROMOTION OF AIR CORPS OFFICERS

To Lieutenant-Colonel

Major Howard C. Davidson to duty as Commander, 19th Bombardment Group, Rockwell Field, 8-10

To Major

Capt. Thomas H. Chapman assigned as Chief, Inspection Branch, Procurement Section, Materiel Division, Wright Field, August 21.

Captain Rudolph W. Propst assigned as Chief, Purchase Branch, Procurement Section, Materiel Division, Wright Field, August 10.

Captain Ployer P. Hill assigned as Chief of Flying Branch, Administration Section, Materiel Division, Wright Field, August 28.

Capt. Joseph T. Morris assigned as Engineering Officer, Rockwell Air Depot, Calif., August 10.

To Major (Continued)

Capt. Burton F. Lewis assigned as Engineering Officer, Station Complement, Mitchel Field, N.Y., August 13.

To Captain

1st Lt. Roy H. Lynn assigned as Flight Commander, 31st Bomb. Sqdn., Hamilton Field, 8/10.

1st Lt. William Ball assigned as Flight Commander, 31st Bomb. Sqdn., Hamilton Field, 8/10.

1st Lt. Richard C. Lindsay assigned as Flt. Commander, 9th Bomb. Sqdn., Hamilton Field, 8/10.

1st Lt. Edward H. Alexander assigned as Engineering and Armament Officer, 17th Attack Group, March Field, August 10.

1st Lt. John F. Wadman, assigned as Flight Commander, 73d Attack Sqdn. March Field, 8/10.

V-6844, A.C.

To Captain (Continued)

1st Lt. Nathan B. Forrest assigned as Intelligence and Operations Officer, 73d Attack Squadron, March Field, Calif., August 10th.

1st Lt. Charles B. Overacker assigned as Flight Commander, 73d Attack Squadron, March Field, Calif., August 12th.

1st Lt. Paul B. Wurtsmith assigned as Flight Commander, 3rd Pursuit Squadron, Clark Field, P.I., August 7th.

---oOo---

The following-named Air Corps officers, holding temporary increased rank, were assigned to other duties, but retain such temporary rank:

1st Lt. Jesse Auton from Engineering Officer, 73d Attack Squadron, to Adjutant, 17th Attack Group, March Field, Calif.

Major Eugene L. Eubanks from Assistant to Chief of Staff, G-3, GHQ Air Force, to Commander, Hqrs. Squadron, GHQ Air Force, Langley Field, Va.

Captain Kirtley J. Gregg from Supply Officer, 17th Attack Group, to Intelligence and Operations Officer, 95th Attack Squadron, March Field, Calif.

1st Lt. John T. Helms from Engineering Officer, 95th Attack Squadron, to Supply Officer, 95th Attack Squadron, March Field, Calif.

Captain Minton W. Kaye from Intelligence and Operations Officer, 73d Attack Squadron, to Supply Officer, 17th Attack Group, March Field.

Captain A.J. Kerwin Malone from Flight Commander, 95th Attack Squadron, to Intelligence and Operations Officer, 34th Attack Squadron, March Field, Calif.

Major Alfred Lindeburg from Supply Officer, Station Complement, Barksdale Field, La., to Supply Officer, 3rd Wing, at that station.

1st Lt. James S. Sutton from duty with 73d Attack Squadron, to Transport Officer, 64th Service Squadron, March Field, Calif.

Major John P. Temple from Supply Officer, 3d Wing, Barksdale Field, La., to Supply Officer, Station Complement, at that station.

1st Lt. James F. Thompson, Jr., from Commander, 1st Photo Section, to Meteorological Officer, Station Complement, Brooks Field, Texas.

1st Lt. Thomas L. Thurlow from Supply Officer to Intelligence and Operations Officer, 30th Bombardment Squadron, Rockwell Field.

Major John E. Upston from Commander, Hqrs. Squadron, GHQ Air Force, to Assistant Chief of Staff, G-3, GHQ Air Force, Langley Field, Va.

---oOo---

CHANGES IN STATION OF AIR CORPS OFFICERS

To Langley Field, Va.: Captain Glenn C. Salisbury for duty with Station Complement. - 2nd Lts. Eugene P. Mussett and Clifford H. Rees from Hawaiian Department to duty with GHQ Air Force - 1st Lt. Edwin G. Simenson, 50th Obs. Squadron, relieved from temporary rank upon date of departure from Hawaii.

To Edgewood Arsenal, Md.: Captain William J. Flood, from Maxwell Field, Ala., for duty with Air Corps Detachment.

To Bolling Field, D.C.: Captain Samuel C. Eaton, Jr., from Edgewood Arsenal, Md., for duty with GHQ Air Force.

To Boston, Mass.: 1st Lieut. Richard E. Cobb, from Assignment and duty at Boston Airport to duty with Organized Reserves, 1st Corps Area.

To Barksdale Field, La.: Captain George R. Bienfang, 48th Pursuit Squadron, Chanute Field. Relieved from temporary rank August 10th. - Capt. Elmer J. Rogers, Jr., from 18th Composite Wing. Relieved from temporary rank upon date of departure from Hawaii. - 1st Lt. Leo P. Dahl, 19th Pursuit Squadron. Relieved from temporary rank upon date of departure from Hawaiian Department.

To March Field, Calif.: 2nd Lts. Robert H. Terrill and Sam H. Wiseman from Hawaii, for duty with GHQ Air Force. - 1st Lt. Donald L. Hardy, 4th Obs. Squadron, relieved from temporary rank upon date of departure from Hawaii. - 1st Lt. John L. Davidson, from Chanute Field, for duty with GHQ Air Force.

To Randolph Field, Texas: 2nd Lt. James W. Gurr from Hawaiian Department. - 2nd Lt. Daniel S. Campbell, 26th Attack Squadron, relieved from temporary rank upon date of departure from Hawaii.

To the Philippines: 1st Lieut. Shelton E. Prudhomme from Wright Field, Ohio. - Captain Thomas S. Power, 20th Bombardment Squadron, Langley Field, Va., relieved from temporary rank December 28, 1935.

To Brooks Field, Texas: 2nd Lt. Thomas C. Morgan from Hawaiian Department.

To Chanute Field, Ill.: 2nd Lt. Nicholas E. Powell from Hawaiian Department.

RETIREMENT: Lieut.-Colonel Archie W. Barry, July 31, 1935, having attained age of 64 years.

RELIEVED FROM AIR CORPS: 2nd Lieut. Donald F. Buchwald from flying training at Air Corps Training Center and to 18th Infantry at Fort Hamilton, N.Y.

---oOo---

OFFICERS RELIEVED FROM TEMPORARY RANK

Major Victor H. Strahm from assignment, duty and temporary rank with the Materiel Division, Wright Field, Ohio.

Captain Douglas T. Mitchell from assignment, duty and temporary rank as Intelligence and Operations Officer, 79th Pursuit Squadron, Barksdale Field, La., and to report to Commanding Officer of that field for duty.

---oOo---

Changes in the assignment to duty of the following-named officers stationed at Barksdale Field, La., were recently announced:

Captain Milo McCune and 2nd Lieut. Arthur F. Merewether assigned to duty with Station Complement.

Captain William N. Amis, 2nd Lieuts. Harry N. Burkhalter, Jr., and Felix L. Vidal assigned to duty with GHQ Air Force.

---oOo---

The relief of 1st Lieut. Daniel S. Campbell from assignment, duty and temporary rank with 26th Attack Squadron, and assignment to Randolph Field, Texas, was revoked.

MARTIN TEST BOMBERS

The War Department recently released the following article to the press:

"The following information was received from the Glenn L. Martin Company:

The latest of the long line of world famous Martin Bombers was recently flown at Baltimore, Maryland, the home of The Glenn L. Martin Company, its builders. It is now being groomed for entrance in the United States Army bombardment competition to be opened August 22nd at the Engineering Division of the Air Corps at Dayton, Ohio.

The new Martin product has a wing spread of only 76 feet and a loaded weight of approximately ten tons. Consequently, it is much smaller and more compact than the other airplanes entered in the competition which will result in large Government orders for the winner. Nevertheless, the Martin ship carries the full military load required and adequate gasoline to fly non-stop distances far in excess of the specifications. This unusual performance, it is understood, is obtained by using a combination of advanced aerodynamic features, including a new high-lift arrangement on the monoplane wing. After a year of research and experiment the Martin engineers are confident that this airplane will establish a new world's record for efficient load carrying and, since one of the specifications requires that the airplane be as small as is consistent with the military requirements, the Martin Bomber will prove a formidable contender for the winning awards.

The recent flight did not include a speed test, but from observation it appears that the airplane is materially faster than the current Martin model now in quantity production. The Air Corps desires 250 miles per hour in their new bombers and the Martin engineers, although guarded in their comments, expressed satisfaction at the close of the flight.

Since the reorganization of the Air Corps last January, when all the operating forces were grouped into the GHQ Air Force, commanded by Brigadier General Frank M. Andrews, the practical qualities of military aircraft have been given primary consideration in the selection of service equipment. Ease and economy in maintenance, rugged construction, facility in loading gasoline and bombs, ability to get in and out of small rough fields and great maneuverability are essential. The Martin Company is fortunate in these respects, since the new model follows the proven practices used in previous models on which service experience has already been obtained, and the new high-lift device is said to give unexcelled take-off, landing and load carrying charac-

teristics.

Like the current Martin models now in quantity production at the Baltimore factory, the new bomber is an all metal, mid-wing monoplane with retractable landing gear. Power is supplied by two Wright Cyclone geared and supercharged engines of over 800 h.p. each, streamlined into the wing. It carries a crew of four or five men, three machine guns covering all angles of approach, a special bomb rack in which the bombs are easily loaded and discharged, and complete enclosures for both front and rear cockpits. The standard equipment includes two way radio, automatic pilot, adjustable pitch propellers and complete navigating equipment including the new radio "homing" compass.

The Martin ship is purely a bombing and fighting airplane. No compromises in design or construction have been made for any other purpose. The idea that the same airplane, or essential parts of it, may be used in a commercial model for passenger transport or mail carrying has not been considered since that would necessarily detract from the primary purpose - bombing. As a result, this airplane is strictly a war weapon of great destructive capacity and with every facility for that purpose.

Long distance bombing requires complete comfort and convenience for the flying personnel since the accomplishment of such missions is attended by intense physical strain during war time. This has been amply provided in the new bomber by inherent stability characteristics, the automatic pilot, heated cockpits, facilities for changing position in flight, easy adjustable seats, sleeping accommodations and toilet facilities.

The first Martin bomber, a biplane, was produced in 1918 and was purchased in quantity for the Air Corps during its many years of progressive development. In 1932, Martin changed to a monoplane type and, in conjunction with the use of several other advanced ideas, stepped up the bombing speeds approximately 100 m.p.h. - an improvement which forced many changes in the tactical plans for air combat. Now, Martin develops a new combination of advanced features including the high lift device which, without increasing the size of the airplane, permits loadings far in excess of those previously considered normal. Consequently, the new Martin Bomber is another distinct advance in bombing practice and a definite contribution to the national defense."

---oOo---

A Douglas Amphibian has been added to the aircraft at Hamilton Field as the result of a recent flight to Rockwell Field by Major Guy Kirksey who gave in exchange for it a C-14 Fokker Transport airplane.

GENERAL ANDREWS INSPECTS MARCH FIELD

Brigadier-General Frank M. Andrews, Commanding General of the General Headquarters Air Force, from Langley Field Headquarters, visited March Field on July 31st. Arriving at 3:00 p.m. in a Martin Bomber, he was greeted by the roar of an 11-gun salute and the General's March, played by the March Field bugle and drum corps. Thirty-two enlisted men of the Station Complement in a guard of honor platoon were inspected by General Andrews, who commented favorably on their appearance. During his stay at the Southern California Air Corps station, General Andrews was the house guest of his friend of many years, General Henry H. Arnold.

General Andrews' visit was the climax of a rigid inspection of March Field's personnel and equipment by representatives of GHQ Air Force Headquarters at Langley Field, Va. These inspectors who stayed on the reservation for several days, were Lieut.-Colonel Walter R. Weaver, Air Corps; Major Russell Maxwell, Ordnance Department, and Major Ennis C. Whitehead, Air Corps, of Langley Field. So painstaking were the these inspectors that two enlisted men of the 23rd Photo Section were detailed to accompany them to photograph points which the inspectors wished to emphasize.

The visiting General was entertained several times in important social functions both at Riverside and at March Field. At Riverside he affixed his wings to the wall of the St. Francis chapel at the invitation of the Mission Inn which had dedicated this room to famous flyers here and abroad.

At the conclusion of his tour of March Field, General Andrews left for Rockwell and Hamilton Fields to hold similar inspections. He was accompanied by General Arnold, also flying in his own Martin Bomber. Preceding him to Hamilton Field by one day were Major Ray A. Dunn, Wing Executive; Lieut.-Colonel Weaver, Major Maxwell and Captain Lloyd N. Watnee.

---oOo---

ITEMS FROM HERE AND THERE

Mr. T.W. Tillinghast, Sales Manager for the Pratt and Whitney Aircraft Corporation, on a recent visit to Hamilton Field, Calif., explained high altitude control of the 'Hornet' engines to the pilots of the 7th Bombardment Group. He motored from Hartford, Conn., and was the guest of Lieut.-Colonel Clarence L. Tinker during his short stay.

Judge Edgar T. Zook, of San Rafael, took off from Hamilton Field, Calif., recently to visit the Idaho Maryland mine near Grass Valley, Calif. The tiny Fairchild 24 with its grey

fuselage was an unusual sight on the Army flying field.

The 35th Division Air Corps, Missouri National Guard, was encamped for two weeks recently at Camp Clark, Nevada, Mo. Commanded by Major Phil Love, of St. Louis, the division consisted of 20 officers, 95 men and seven airplanes. Originally slated to go to Fort Riley, Kansas, the recent flood damage there necessitated a change in plans.

After a reconnaissance by Lieut.-Colonel C.L. Tinker, Commanding Officer of the 7th Bombardment Group, Hamilton Field, Calif., and his staff, Point Eeyes was chosen as the prospective site of a rescue post for the bomber gunnery which will take place between Bolinas and Bodega Point. A rescue craft with 4 men, including a radio operator and a cook will constitute the rescue party according to present plans.

Two Air Corps units stationed at March Field, Riverside, Calif., celebrated their natal days at Newport-Balboa, California, on August 3rd, these being the 23rd Photographic Section and the 17th Attack Group Headquarters Detachment.

A skeet shooting ground has been established at Hamilton Field, Calif., for the practice of the officers. As the skill of these officers increase, matches will be scheduled with teams from other Army posts, also with civilian teams.

Captain Walter E. Richards, Air Corps, recently reported to the Commanding General of the First Corps Area for duty as Commanding Officer of the Boston Airport, East Boston, Mass. He will also have charge of Air Corps reserve activities in this section.

Three night demonstrations by the 62nd Coast Artillery (Anti-aircraft) regiment and the 97th Observation Squadron, Air Corps, will be given during the First Army field training exercises in the Pine Camp area of New York, the first on the night of August 20th, the second on August 25th and the third on August 28th.

The sleeve targets the Army airplanes will tow during the night firing will be the new type developed by the Air Corps, which can be towed at a speed of 200 miles an hour, or twice the speed of towing for the former type of sleeve target.



Air Corps



ISSUED BY THE
OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT, WASHINGTON.

Ship Corps



THE SHIP CORPS
OF THE
NAVY

Information Division
Air Corps

September 1, 1935

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---000---

THE THIRD STRATOSPHERE FLIGHT

The War Department having given its approval to the cooperation of the Army Air Corps with the National Geographic Society in the Third Stratosphere Flight, orders have been requested for the participation of the necessary personnel to launch this expedition, the primary purpose of which is to penetrate the upper air strata to the utmost possible extent in order to obtain various scientific data now little known.

Needless to say, every effort will be made to insure the success of this third attempt to explore the stratosphere. The personnel assigned to navigate the stratosphere balloon on the second attempt, which was abandoned when the top of the bag blew out during the process of inflation, will carry on in the forthcoming flight. It is understood that the damage to the bag was confined to a relatively small area, also that the substitution of a new top was not an expensive problem.

Captain Albert W. Stevens, Air Corps, Commanding Officer of the Expedition, whose regular station is Wright Field, Dayton, Ohio; and Captains Cyril A. Anderson and Randolph P. Williams, Air Corps, pilots, who have been on detached service at that post since the abandonment of the second attempt, are slated to proceed to several places for the purpose of inspecting and shipping helium cylinders and supplies from Scott Field, Ill.; inspecting the balloon and checking the results of tests of balloon fabric and panels by the Goodyear Zeppelin Engineers at Akron, Ohio, and of testing meteorological and other instruments at the Bureau of Standards, Washington, D.C. They are then to proceed by air at the proper time to Rapid City, South Dakota, for the purpose of assembling the apparatus, inflating the balloon, and, finally, making the flight.

Among other Air Corps personnel de-

tailed for duty in connection with arrangements for the flight are Major Charles D. McAllister and Corporal Malvin F. Trimble, from Maxwell Field, Ala.; Captain Herbert K. Baisley from Bolling Field, D.C.; 1st Lieut. James F. Phillips, in all probability, and Mr. Louis Hegemeyer, motion picture technician, from Wright Field; Master Sergeant Grover B. Gilbert and Technical Sergeant Artie L. Revert from Chanute Field, Ill.; Master Sergeant Joseph B. Bishop, Staff Sergeant Oluf T. Jensen, Sergeant Glenn W. Money, Corporal Joseph Van Agtmael and Private, 1st Class, Louis D. Laurin from Scott Field, Ill.; Sergeant Martin Sebode, Corporal Horace R. Slutter, Privates Norman A. Bartlett and Edward D. Steel from Langley Field, Virginia, and Staff Sergeant William F. Bernheisel, Signal Corps, from Office Chief Signal Officer, Washington, D.C.

The enlisted personnel from Scott Field will be assigned the task of rigging and inflating the balloon, and those from Langley Field and Sergeant Bernheisel will set up and operate a weather station at Rapid City.

Captain Baisley and Sergeant Gilbert will be engaged in making aerial photographs incident to the flight, and of the stratosphere balloon, and Lieut. Phillips and Mr. Hegemeyer will busy themselves with securing a motion picture photographic record of the flight.

Sergeant Revert will assist in the installation of a radio and public address and loud speaker system at Rapid City, to be used to direct the inflation of the balloon.

All that can be added in conclusion is to express the hope that the third stratosphere flight will be a successful one in every way, and that the scientific data gained will measure up to the fullest expectations of the sponsors thereof.

---000---

AERIAL PHOTOGRAPHS TAKEN AT NIGHT EQUAL THOSE TAKEN DURING DAYLIGHT

During a training flight in night aerial photography with the latest airplane night photographic equipment from an altitude of 1,500 feet at 9:30 p.m., Lieut. Hobson and Technical Sergeant Brees of the 23rd Photo Section, stationed at March Field, Riverside, Calif., made an aerial photograph of the Exposi-

tion at San Diego, Calif., that is equal to those taken during daylight hours.

These photographs demonstrate the efficiency and advancement of military photography, for during the last great war all troop movements, even the feeding of the soldiers in the trenches, was

(Continued on page 10)

PHOTOGRAPHING BOMB BURSTS FROM SAME AIRPLANE ACCOMPLISHING THE BOMBING

The Photographic Officer of the Photo Detachment, 19th Bombardment Group, Rockwell Field, Calif., Captain Norris B. Harbold, recently submitted photographs of a type A-8 camera mount "adapter," developed and tested by this detachment for using an aerial camera vertically in the rear floor gun opening of the B-10 and B-12 airplane. This arrangement has been successfully used in photographing bomb bursts from the same airplane accomplishing the bombing.

This adapter enables reconnaissance strips to be flown, using a B-10 with full load of bombs.

Since the bomber is in a position to give the photographer the drift or crab in degrees, also the ground speed, a vertical view finder is unnecessary.

A satisfactory one-strip mosaic map of Rockwell Field was made recently, using this set up, the flying having been accomplished with a strong cross wind in evidence.

The adapter was constructed of wooden blocks and wooden braces fitted so that no holes were drilled in the airplane. Rigidity was encouraged and anchorage was established after the mount and adapter were in position by using safety wire both fore and aft from the mount adapter to the airplane structural bracing.

---oOo---

AIR CORPS EXHIBIT AT ALL-AMERICAN AIRCRAFT SHOW

Lieut.-Colonel Ralph Royce, Air Corps, commanding Selfridge Field, Mich., received instructions to arrange an exhibit for the All-American Aircraft Show which was held at Detroit City Airport from July 20th to 28th. The exhibit consisted of one each P-26B, P-29 and YA-13 airplanes, and radio navigation equipment, and from all accounts proved to be a very interesting display.

Lieut.-Colonel Royce designated the following-named officers and noncommissioned officers to assist with the exhibit: Major James E. Parker, Captains Herbert H. Tellman, George F. Schlatter, Norman R. Burnett, 1st Lieuts. William J. Bell, Joe W. Kelly, David W. Hutchison, Clark N. Piper, Charles H. Anderson, 2nd Lieut. Frank G. Jamison, Staff Sgt. Harvey R. Davis, Sergeant Charles A. Pung, Corporals Joseph W. Kellogg and Jack E. Day.

---oOo---

TRAINING FOR 3RD CORPS AREA RESERVES

The 49th Bombardment Squadron, Langley Field, Va., with the whole-hearted co-operation of the 96th and 20th Bombardment Squadrons, the 8th Pursuit Group

and the 37th Attack Squadron, completed on August 3rd a 14-day training camp for Reserve Officers of the Third Corps Area.

The officers responsible for the camp wish to express their appreciation for the care shown in the selection of the officers sent to Langley Field for training. No small part of the credit due for the excellent showing is their's. By that is meant the fact that during the entire camp period no accidents of any kind were experienced. The source of the following remark escapes the writer, but it can bear publication and expresses very well the thought, "Nary a shock cord broken nor tail skid cracked."

During the 14-day period of training, the 35 Reserve officers flew a total of 614 hours, or approximately 18 hours per pilot. The News Letter Correspondent expresses regret that the lack of ships fitted for Instrument Flying prevented giving more instruction in blind flying, because it is realized that this branch of training is becoming increasingly important every day.

For the purpose of simplifying the flying administration problem, the camp was divided into two groups, and two senior officers, Majors Bazely and Whitehead, were placed in charge. This arrangement made it possible to retain an accurate check on all the officers and keep them informed of all changes in orders and schedules, and it proved to be an excellent one.

---oOo---

COL. H. WEIR COOK COMES TO WASHINGTON

The appointment of Lieut.-Col. H. Weir Cook, of Indianapolis, as City Traffic Manager for the American Airlines in Washington, was recently announced by Mr. C.E. Smith, President of the airline.

This former Air Corps officer, who has devoted nearly 20 years to commercial and military aviation, is now a Lieutenant-Colonel in command of the 38th Division National Guard Air Corps. Holding the unofficial title of "Ace," by virtue of bringing down seven enemy aircraft during the World War, Col. Cook's record in that conflict is a brilliant one, he having been twice cited for extraordinary heroism in action in France and being awarded the Distinguished Service Cross with oak leaf clusters for gallantry in action.

---oOo---

AIR CORPS FOR ARGENTINA

According to press reports, Argentina is planning a general reorganization of her military aviation, including the expenditure of nearly \$6,000,000 for airplanes, ammunition and other equipment. The President of the South American Republic has sent two bills to Congress to establish an Air Corps as the fifth arm of the Army and to appropriate the necessary funds.

V-6851, A.C.

THE SCHOOL SITUATION FOR AIR CORPS OFFICERS

Before 1930 little desire for Service schooling developed among the junior Air Corps officers. Effective during that year, for some reason, a flood of applications started pouring into the War Department from these Air Corps officers, requesting and pleading that they be sent to school, and listing every conceivable sort of school from civilian courses in law, motion picture photography, and higher Finance to immediate consideration for education at the Army War College and training in Higher Command. Possibly the reason for this yearning for education has been caused by the fact that the majority of officers have now reached the age where they can clearly foresee that their usefulness is becoming somewhat limited because of the fact that they have no Air Corps specialty other than flying and have no knowledge of the problems confronting the rest of the Army. Then again it may have been caused by the thought that such a course would be excellent career insurance. At any rate, no matter what the cause, the result is that the applications continue to pour in until it is a rarity to find an officer's preference card on which no school is desired. Let us now turn to the schools themselves and examine them to see the chances of an officer's obtaining his desire for learning.

The most available school for an Air Corps officer after graduating from the Air Corps Training Center is the Air Corps Technical School. Under the present policy, only 1st Lieutenants and 2nd Lieutenants are given instruction in this school, it being the opinion that in the first years of an officer's service after serving with a tactical unit he should become proficient in some field of Air Corps Technical Training. Normally, the officer student body of this school is forty, divided into the following courses: Maintenance-Engineering-Armament, Communications and Photography. The eligibility for this school is unlimited except for the fact that an officer must express a desire to attend and be recommended by his Commanding Officer for the course. Priority, however, is normally given to the officer having two or more years' service rather than those just assigned to the Air Corps. For the School Year 1935-1936, the student body has been reduced from forty to twenty-eight, due to the personnel requirements under the reorganization of the Air Corps.

Further training along technical lines is provided at the Air Corps En-

gineering School at Wright Field, Ohio. This course normally has a class of approximately ten officers. Eligibility for this school is somewhat limited, it being the policy to select only officers who have had the proper technical education previous to their commission in the Regular Army and who are interested in the higher engineering and design problems of aircraft and aircraft engines. Priority for assignment to this school is given to those officers whose educational records show that they have the proper background to undertake this course. This priority list is revised from year to year and successful graduates of this school can expect normally a four-year detail to duty in which this education can be utilized in aircraft experimentation, procurement and maintenance.

Officers submitting applications are furnished a questionnaire upon which their priority is based. Priority for the engineers is in large measure established upon recommendation of the Chief of the Materiel Division.

After graduation from the Air Corps Engineering School the next step in an officer's education in case he desires to be a technical specialist is a detail to attend a civilian educational institution. At the present time the Air Corps is allotted sixteen student officers per year for this form of education as follows: four at University of Michigan, one-year Engineering Course; four at Massachusetts Institute of Technology, one-year Meteorological Course; four at California Institute of Technology, one-year Meteorological Course; and four at Harvard School of Business Administration, the latter being a two-year course with two officers selected annually. The number authorized to attend these schools varies from year to year, depending upon annual appropriations and the tuition charged at each school. All tuition is paid for by the Government, without expense to the officer selected.

The Advanced Engineering Course at the University of Michigan is limited to those officers who have graduated from the Air Corps Engineering School and who have been recommended by the Chief, Materiel Division as being well qualified to pursue such a course.

The Meteorological Courses at the Massachusetts Institute of Technology and the California Institute of Technology are open to all who apply and whose basic educational qualifications show that they are fully qualified to pursue such a course. An officer must have a good mathematical education in

order to be given priority for this school.

The course in Business Administration at Harvard is limited to officers holding a university degree, and the Directive further states that it is desirable that he be a graduate of the Industrial War College; however, the latter qualification is not mandatory.

Passing from a discussion of the technical education open to an officer, let us consider the schools for tactical training. The basic school for tactical training for Air Corps officers is the Air Corps Tactical School at Maxwell Field, Alabama. At the present time the student body is limited to sixty officers per year. The limitations on eligibility for selection for this school are: (1) The officer must be above the grade of 2d Lieutenant; (2) He must have a General Average Efficiency rating of at least above average; and (3) Not to exceed 14% of the Quota will be from the Field Officer grades and not to exceed 60% will be from the grade of Captain. There are at the present time 768 Air Corps officers of all grades, exclusive of 2nd Lieutenants, who have not attended this school. It may therefore appear that the opportunities to attend this school are very limited. However, since lack of physical fitness bars some officers and others desire to qualify along technical lines, there is a fair chance for all officers who attain the requisite efficiency ratings.

The following system is in effect for selecting officers for the Air Corps Tactical School. Depending on an officer's availability, all officers of the various grades are annually placed on a list in accordance with their general average efficiency rating; then within the various percentages in grade, the officers having the highest rating are given the call. It may be stated that under this system no officer has yet been chosen whose rating was not excellent or better.

Leaving the Air Corps schools we will now discuss those which are directly under the supervision of the War Department. The next school in line of higher tactical training is the Command and General Staff School at Fort Leavenworth, Kansas. The following is an extract from the Directive for this school which applied to the class selected for the 1935-1936 course:

"3. Qualifications. Student Officers will be selected from non-graduates of the School of the Line, the General Staff School, or the Command and General Staff School, possessing the following qualifications:

a. Who are not on the General Staff Corps Eligible List.

b. Who are above the grade of second Lieutenant.

c. Who will be less than 48 years of age on September 1, 1935. At least one-half the quota of captains, and the entire quota of first lieutenants, from the Arms, will be less than 40 years of age on the above date. This principle will be a guide to the Services.

d. Not to exceed 15 per cent of the quota of each Arm will be from the field officer grades and not to exceed 70 per cent will be from the grade of captain.

e. Who are in good physical condition.

"4. Chiefs of Arms and Services will submit, not later than December 1, 1934, lists, in numbers as above, of those officers whose War Department records indicate that they are best fitted to pursue this course. No assignment, other than foreign service, will preclude an officer from the list, but Chiefs of Arms and Services may invite attention to cases of assignment they deem of sufficient importance to warrant postponement of an officer's selection until some future year. In such cases the names of recommended alternates will be submitted."

Under the two-year course of instruction, the Air Corps had been apportioned seventeen officers per year; now that the course has been reduced to one year, it is understood that the allotment will be thirty-four officers per year beginning with the 1936-1937 class. Again it can be seen that priority for officers attending this school depends on the individual's record and as only thirty-four can attend each year, competition is bound to be keen and with 60 graduates of the Tactical School being made especially eligible each year, it behooves every officer to attempt at all times to increase his efficiency so that he may be considered as "an officer whose record indicates that he is best fitted to pursue this course".

Among the War Department schools a very important source of education is the Industrial War College. In describing the qualifications for this school, we can not hope to improve on the following extract which is quoted from the Directive for this school for the School Year 1935-1936:

"2. Students will be selected from Army officers of one of the following three groups:

a. Officers who have graduated at the Army War College, or are in the present War College Class.

V-6851, A.C.

b. Officers who have graduated at the Command and General Staff School and upon graduation were recommended for General Staff eligibility.

c. Officers who have demonstrated outstanding ability and who, in the opinion of the chief of branch, possess special qualifications for this training.

"3. Officers selected must in all cases have a general rating not below "Excellent".

In addition, students will be within the following age limits:

Lieutenants.40
Captains45
Majors49
Lieut.Colonels & Colonels.	.52

a. No officer of the Infantry, Cavalry, Field Artillery, or Coast Artillery Corps will be selected to take this course unless he is an officer of outstanding ability and has demonstrated qualifications for duty of a General Staff nature. Final selections of officers from these arms will be made by the Chief of Staff.

"4. In recommending officers for detail as students, Chiefs of Arms and Services should give consideration to the mission of the College, to the nature and scope of its curriculum, and to the best utilization of the officers' future services in the scheme of national defense as a logical result of their having had this training."

The Air Corps annual allotment for this course is nine officers and those officers who desire education along logistic and business administration lines, and who have been outstanding in such phases of Army requirements, will find it advantageous to keep in mind the qualifications leading to detail to this school and do everything possible to make themselves eligible for this wonderful course of study.

Finally, let us consider the ultimate goal of all Army officers seeking a complete military education, namely, the Army War College. As to qualifications, let us again quote from the Directive for this school for the class of 1935-1936.

"3. Qualifications. Student officers will be selected from non-graduates of the Army War College, possessing the following qualifications:

a. Who are above the grade of 1st Lieutenant.

b. Who will be less than 52 years of age on September 1, 1935.

At least one-half of the list submitted by each Arm and Service will consist of officers who will be less than 44 years of age on that date.

(Where a fraction occurs, the extra

officer may be either above or below the age of 44 years in the option of the Chief of Arm or Service concerned.)

c. Who are in good physical condition.

d. Whose names are now borne on the General Staff Corps Eligible List, or, who are now graduates of, or will graduate in the 1934-1935 Class from the Army Industrial College.

"4. Graduates, Army Industrial College. In selecting officers from the procurement branches, preference will be given graduates of the Army Industrial College.

"5. Chiefs of Arms and Services will submit not later than December 15, 1934, lists of those officers whose War Department records indicate that they are best fitted to pursue this course. No assignment, other than foreign service, or the policy as to four years' duty in Washington, D.C., will preclude an officer from the list, but Chiefs of Arms and Services may invite attention to cases of assignment they deem of sufficient importance to warrant postponement of an officer's selection until some future year. In such cases the names of recommended alternates will be submitted."

At the present time, the Air Corps apportionment is nine officers annually, 30% of which, or three officers, must be graduates of the Army Industrial College. What are the numerical chances of obtaining this course? It can be easily computed that an Air Corps officer graduating from the Command and General Staff School has one chance in 5-2/3, while those graduating from the Army Industrial College have one in three.

Throughout all this narrative, we have tried to convey the impression that the chances for an officer's obtaining further education in his Army career is not a question of luck, pull, acts of Providence, or the influence of political relatives and friends, but it is the question of an officer's record. Many officers continually ask, "Why cannot I go to school? I've been asking for it for ten years." As if the act of asking was considered equivalent to being selected as a student. If an officer's record is outstanding, he will go to school; if his record is good enough, he may go to school; if his record is not good enough, he will not be considered. What's the answer to each individual's problem of trying to obtain more military education? We hope by this time that you know the solution as well as we do.

SEVENTH BOMBARDMENT GROUP, AIR CORPS
Hamilton Field, California

HISTORICAL RECORD: The 7th Bombardment Group was organized October 1, 1919, at Park Field, Tenn., as Headquarters, 1st Army Observation Group; redesignated Headquarters, 7th Group (Observation) March 14, 1921; made inactive August 30, 1921; redesignated 7th Bombardment Group Headquarters, March 24, 1923. June 1, 1928, it was reconstituted

9th Bombardment Squadron.
11th Bombardment Squadron.
31st Bombardment Squadron.
69th Service Squadron.
70th Service Squadron.
38th Observation Squadron.

BATTLE HONORS:

Lorraine
St. Mihiel
Meuse-Argonne

DESCRIPTIVE INSIGNIA

Shield: Azure on a bend or three crosses pattee sable. The shield and bend are in the colors of the Air Corps. The bend is taken from the arms of the Province of Lorraine, while the three crosses symbolize the three battle honors of the organization.

Crest: On a wreath of the colors (or and azure) a drop bomb paleways sable piercing a cloud proper. The crest represents the duty as a bombardment group.

Motto: Mors ab alto (death from above).

---oOo---

RECRUIT SAYS LETTER OF APPRECIATION

The News Letter Correspondent from Hamilton Field, Calif., sends in a copy of the following letter received at that post from a prospective applicant for enlistment as being of newsworthy interest:

Luzerne, Penna.
August 6, 1935.

Headquarters Hamilton Field,
Office of the Commanding Officer,
San Rafael, California.

Dear Sir:

Leaving New York tonight for Hamilton Field, San Rafael, Calif. Will arrive on or about August 13, 1935.

Thanking you for your courtesy for accepting me for enlistment at your station,

Sincerely yours,

***** * *****

---oOo---

During the month of July, the Engineering Department of the San Antonio Air Depot overhauled 18 airplanes and 59 engines, and repaired 32 airplanes and 28 engines.

---oOo---

ed and made active at Rockwell Field; March 15, 1932, it moved to March Field; December 5, 1934, it moved to Hamilton Field, California.

COMPOSITION:

7th Bombardment Group Headquarters.

LIGHTER THAN AIR ACTIVITIES AT FT. BRAGG

In a recent field exercise, the 2nd Balloon Squadron, Pope Field, Fort Bragg, N.C., far excelled the 24-hour requirement of the War Department in evacuating its home airdrome. At 10:00 a.m., July 15th, the Commanding Officer, Air Corps Troops, issued an order for the 2nd Balloon Squadron to proceed immediately to a location 20 miles distant on the Fort Bragg Reservation, prepared to conduct Artillery observation for a period of three days. At 1:15 p.m. the same date, or in just three hours and fifteen minutes, the truck train, balloon winches, and the balloon cleared the home airdrome. The truck train carried complete equipment and supplies for the three days in the field.

According to the final reports covering the Fiscal Year 1935, it was found that the Field Artillery at Fort Bragg was not making sufficient use of the Balloon Squadron. By the same plan whereby the Field Artillery supplies liaison officers to Infantry units, Air Corps officers on duty at Fort Bragg decided that it was the responsibility of the Air Corps to see that proper use was made of them by the Field Artillery. Therefore, at the recommendation of the Commanding Officer, Air Corps Troops, an Air Corps officer was appointed by Headquarters, Fort Bragg, as air liaison officer to the Field Artillery Brigade. Now, whenever a firing memorandum is issued by Headquarters, Fort Bragg, the air liaison officer interviews the regimental commanders concerned and urges them to employ either airplane or balloon observation on all firing. As a result of this system, during the month of July, 1935, the Second Balloon Squadron performed approximately three times as much artillery observation as it did during the entire Fiscal Year of 1935.

During the Fiscal Year 1935, the officers of Flight "C," 16th Observation Squadron, insofar as piloting is concerned, completed 93.5% of the requirements of the War Department Training Directive. Instrument and night flying were completed 100%. This was done despite the fact that during the greater part of the year Pope Field had only two airplanes and none regularly equipped for instrument flying. A hood was installed on one of the OI-G airplanes, and it served very well for this purpose. In addition to the amount of flying completed on the training program, the Flight performed all the cooperative missions required by Fort Bragg and maintained one airplane for tow target missions at Fort Barrancas, Florida, for 53 days. For the year, the four pilots on duty with the flight averaged over 255 hours each, pilot's time. This does not include

the many hours the officers flew as observers performing communications exercises and actual artillery observation.

---oOo---

CADET McDUFF RECOMMENDED FOR THE D.F.C.

"Heroism does not go unnoticed in the Army Air Corps," remarks the News Letter Correspondent from March Field, Calif., and he then goes on to say that Flying Cadet Francis H. McDuff, the pilot who acted with such complete disregard of self on June 22nd near Banning, Calif., has been recommended by Brigadier-General Henry H. Arnold, commander of the First Wing of the GHQ Air Force, for the award of the Distinguished Flying Cross. Cadet McDuff earned this recommendation while piloting a Douglas Observation plane from March Field to Brooks Field, Texas, at the conclusion of Wing maneuvers held at Long Beach and Mines Field, Los Angeles. The recommendation reads:

"With Cadet McDuff, riding in the nose cockpit as observer, was Captain Richard I. Dugan, Air Corps, and in the rear gunner's cockpit was Tech. Sergeant John I. Giles. All three men were members of the 38th Observation Squadron, Brooks Field. Fifteen minutes after taking off while in the vicinity of Banning, Calif., the left engine began to miss badly and gasoline started pouring out of the right side of the engine over the hot exhaust stacks. With cool judgment the cadet started heading back to March Field.

The escaping gasoline became ignited, completely enveloping the left engine and wing in flames. Knowing the extreme difficulty his passengers would have in extricating themselves from the airplane due to peculiar design characteristics, Cadet McDuff, ignoring the opportunity to jump to safety and true to Air Corps traditions, held the airplane in a slow glide until both Capt. Dugan and Sgt. Giles had climbed out and jumped to safety."

By the time Cadet McDuff was able to jump, the plane was so low that he struck the ground in the first opening swing of the parachute but without injury. The airplane, then a mass of flames, crashed into a nearby mountain-side.

General Arnold stated that the circumstances under which Cadet McDuff distinguished himself in saving his flying companions furnish an outstanding example of heroism and loyalty and reflect great credit on himself and the military service.

The recommendation for the award of the Distinguished Flying Cross to Cadet McDuff was forwarded through Brigadier-General Frank M. Andrews, Commanding General of the GHQ Air Force, to the War Department.

SOUTHERN RESERVE OFFICERS IN CAMP

Twenty Reserve officers of the Fourth Corps Area learned much about the Air Corps by long hours of hard work during their fourteen days' Training Camp at the Municipal Airport, Atlanta, Ga., July 21st to August 3rd. The Reserves were directed by Captain John B. Patrick, Non-Divisional Air Corps Units Instructor, assisted by Lieut. Robert W. Stewart, to organize themselves into a provisional squadron with complete tactical and administrative responsibilities. The various squadron duties were proportioned among the trainees according to their individual abilities.

This plan was very effective. With only nine airplanes available, over 400 hours of tactical flying were accomplished. All pilots were soloed on service type airplanes. Pursuit, Observation, Attack and Bombardment missions were simulated in the two OI-E's and the six PT-3's. An O-25A, equipped for instrument flying, was used for instruction purposes. The mornings were devoted to flying and the afternoons to class work and squadron duties, with occasional lectures by instructors from the Air Corps Tactical School, Maxwell Field, Ala., which lectures aroused intense interest regarding the use of the Air Force for National Defense.

Most interesting was the General Courts Martial held one afternoon by the members of the camp to illustrate the functioning of military courts and the operation of military law. The court, following the precedent set by the members of the preceding camp, discharged the accused but fined the prosecution, Lieut. William Conway Allen, for criminal prosecution.

The officers attending the camp unanimously voted it the most interesting and profitable one they had ever attended. They were: Majors James A. Meissner, William L. Plummer, Francis F. Hughes, 1st Lieuts. Mitchell P. Borden, Bayard B. Borden, John H. Catchings, Edward C. Davis, Herbert F. DeBuys, Charlie S. Tidwell, William C. Allen, Theron B. Herndon, James S. Charles, Thomas N. Charles, Earnest H. Briscoe, Joseph H. McAnulty, James B. League, 2nd Lieuts. Joe E. Barton, John R. Kane, William T. Lovelace, Walter R. Hostettler, and Lieut.-Colonel R.H. McDonald, Medical Reserve, Flight Surgeon.

---oOo---

The monthly Control Area Supply and Engineering Conference at the San Antonio Air Depot, Duncan Field, Texas, was held on August 6th, with an attendance of nine officers from Kelly, Randolph, Barksdale and Brooks Fields, and the officers of the San Antonio Air Depot.

NEW EXECUTIVE OFFICER AT MARCH FIELD

Lieut.-Colonel Hubert R. Harmon, Air Corps, an officer with a colorful and interesting career, recently reported for duty with the First Wing of the General Headquarters Air Force at March Field, Calif., and was appointed Executive Officer and Operations Officer of the First Wing. This position calls for the temporary rank of Lieut.-Colonel and Col. Harmon was advanced to this rank effective August 13, 1935.

Lieut.-Colonel Harmon served as Assistant Military Attache for Air at the American Embassy, London, England, for several years, and is an authority on European military aviation. He is a graduate of the U.S. Military Academy, and served a tour of duty there as an instructor. Just recently he graduated from the Command and General Staff School at Fort Leavenworth, Kansas.

This is not the first time a Lieut.-Colonel Harmon has been stationed at March Field. Lieut.-Colonel Hubert Harmon's brother, Lieut.-Colonel Millard F. Harmon, was at one time Commandant of the Air Corps Primary Flying School at March Field. The latter is now stationed at Barksdale Field, La., and is in command of the 20th Pursuit Group.

---oOo---

NEW IDEAS ON LINK BLIND FLYING TRAINER

Sergeant Ward C. Davis of the 64th Service Squadron, March Field, Calif., has been detailed by the War Department to proceed to the Link Aviation Device Company at Binghamton, New York, to confer with officials of that concern.

Sergeant Ward's mission will include a great deal of practical work on the Link Blind Flying Trainer, manufactured by the Binghamton concern. The Veteran Air Corps noncommissioned officer, who is department chief in charge of the work at March Field, has developed many new ideas regarding the instrument which he is anxious to discuss with the manufacturers. He left San Francisco for Binghamton, via the Panama Canal, on August 3rd. He is one of the pioneers of March Field, having served at that post since it was reopened in 1927. Previously he had been a member of the 19th Pursuit Squadron at March Field in 1922.

The instrument flying Link type trainers were procured for the training of Air Corps personnel in the use of blind flying instruments. Reports on the operation of this device indicate that it tends to reduce the amount of training in the instrument flying airplane by approximately two hours.

Various Army Air Corps fields have been furnished with one or more of the Link Trainers, while others are due to receive same in the very near future.

V-6851, A.C.

SOUTHWESTERN AIRWAYS ASSUME GREATER IMPORTANCE

The Southwestern Airways, with headquarters at Fort Sam Houston, Texas, was originally formed in 1928 from personnel of the various Air Corps organizations of the 8th Corps Area, who were placed on detached service. On March 13th of that year, Captain Thad V. Foster (then 1st Lieutenant) was assigned to duty as Control Officer, and he remained continuously on this assignment until June 15, 1935, when he was transferred to the Air Corps Tactical School at Maxwell Field, Ala., Captain Charles A. Pursley, Air Corps, succeeding him as Control Officer and as Commanding Officer of the 8th Corps Area Air Corps Detachment.

On June 1, 1932, the Air Corps Detachment, 8th Corps Area, was formed with an authorized table of organization of 61 enlisted men. At the time of the formation of the Air Corps Detachments in the other Corps Areas, the name of this organization was changed to the 8th Corps Area Air Corps Detachment.

With the removal of the Third Attack Group from Fort Crockett, Texas, the organization was increased to 64 enlisted men, and later, on July 1, 1935, to 79 enlisted men.

The Southwestern Airways operates, and the 8th Corps Area Air Corps Detachment furnishes personnel for, a total of 12 stations, and before the end of this year it is expected to assume control of Fly Field, Yuma, Arizona.

The Control Officer makes a monthly inspection of these stations, requiring a journey of approximately 3,500 miles by air, if all stations are visited, using approximately 30 flying hours per month.

With the development of the GHQ Air Force, the belief is expressed that the Southwestern Airways will be of vital importance in the moving of large flights. These various airways stations are located at approximately 200-mile intervals in the 8th Corps Area and, in addition, several stations mark and maintain a number of emergency landing fields:

The hope is expressed that within the near future the Southwestern Airways will be developed into a modern airways system, capable of servicing, housing, and clearing large numbers of planes without advance notice or arrangements.

It is the opinion that there is no other organization in the Air Corps or the Army where the duties of the personnel are so varied as those of this organization.

It is planned to establish an independent Air Corps High Frequency Radio Net and Homing Station at six of the Airways stations. This service, it is understood, will be similar to that of com-

mercial aviation companies, enabling the pilot to be in constant communication by voice or code with one of the Airways stations having this equipment.

---oOo---

PARACHUTE JUMPING IN THE PHILIPPINES

During the past three months twelve men have made practice parachute jumps at Nichols Field, P.I., and there are about an equal number waiting favorable weather in which to jump.

A local club has been formed for the purpose of giving each man a certificate of accomplishment after each successful jump. This certificate is signed by the Commanding Officer and makes an ideal souvenir of the occasion.

A peculiar circumstance has arisen which makes these jumps notable. There seems to be some uncertainty of air currents in the vicinity of Nichols Field, and only two of the number who have jumped have succeeded in landing on the flying field. The majority have landed either in the adjoining rice fields or the thickets along the Paranaque River. No casualties, however, have been reported other than minor scratches and bruises.

Officers and enlisted men who have made practice jumps during the past three months are enumerated below, as follows:

1st Lieuts. Carl A. Brandt and Hugh A. Parker, Air Corps.

Privates Vernon A. Cravens, John B. Smith, Allen R. McCabe and Charles B. Smith, 66th Service Squadron.

Private, 1st Class, Theodore H. Custer, 6th Photo Section, Air Corps.

Sergeant Charles M. Kinchloe, Corporals Joseph A. Toulouse, William J. Dougherty, James E. Duck and Private John E. Striplin, 23th Bombardment Squadron.

---oOo---

MODIFICATION OF P-26A AIRPLANES

Beginning June 22nd, five P-26A airplanes per week have been ferried from Selfridge Field, Mt. Clemens, Mich., to the Boeing factory at Seattle, Wash., for installation of flaps. Pilots from Selfridge Field ferrying these airplanes have then flown P-26A airplanes to Barksdale Field, Shreveport, La., and then returned to Selfridge Field by transport. Since July 28th, all pilots ferrying P-26A's to the Boeing factory are returning them to Selfridge Field.

---oOo---

GENERAL FOULOIS VISITS SELFRIDGE FIELD

Selfridge Field, Mich., was honored by a visit from Major-General B.D. Foulis, Chief of the Air Corps, on July 30th. The General flew in from Bolling Field, made a brief inspection of the post activities, spent the night, and departed the next day.

V-6851, A.C.

LIEUT. GRAY PRESENTED FRANK LUKE TROPHY

With Lieut.-Colonel John H. Pirie in command, the planes of the 73rd Attack Squadron, March Field, Calif., took off early on the morning of August 8th for the American Legion convention at Winslow, Arizona. While the trip had been planned purely for air navigation purposes and for formation flying training, opportunity was afforded during the noon hour for the formal presentation of the Frank Luke Trophy to 2nd Lieut. Frederic C. Gray, Jr., of the Air Corps Reserve.

Brigadier-General Henry H. Arnold, commander of the First Wing, GHQ Air Force, had originally intended to make the flight to Winslow, but had been forced to forego his appearance in the Arizona city because of the fact that during the period of the American Legion Convention he was accompanying Brigadier-General Frank M. Andrews, Commanding General of the GHQ Air Force, on an inspection tour of the Pacific Northwest.

The Frank Luke Trophy was presented to Lieut. Gray during the noon hour following a formation flight and aerial maneuvers over the Arizona city. It was awarded for the best aerial pursuit gunnery performance of the year, Lieut. Gray's score being 1176 out of a possible 1750 points. Lieut. Gray is 24 years old and a native of Abilene, Texas, where he attended high school and the Abilene Christian College. Ten enlisted men made the trip in two air transports.

The day following the flight, the 73rd Squadron returned to March Field, pleased with the reception they had received at Winslow.

AERIAL PHOTOGRAPHY AT NIGHT (Continued from Page 1)

carried on at night under cover of darkness. With this new improvement in night photography, enemy nocturnal movements will no longer be a subject of conjecture, for a close scrutiny of the photograph of the Exposition made by Lieut. Hobson and Sergeant Brees shows it stopped the action of automobiles going down the road as well as people walking along the streets, and sight-seeing at the Fair. These people are easily discernible to the naked eye.

---oOo---

FORMATION FLYING IN HAWAII

According to the News Letter Correspondent from Luke Field, T.H., the 18th Composite Wing, Air Corps, in the last few Aerial Reviews and Aloha Flights, has used the Clover Leaf formation in-

stead of the Javelin formation. He states that this type of formation seems to be better for the rough air over Honolulu and looks excellent from the ground.

---oOo---

CHANGES IN PERSONNEL OF INSPECTION DIV.

Recent changes in the officer personnel of the Inspection Division, Office of the Chief of the Air Corps, are as follows:

Captain Lowell H. Smith, Chief, Inspection Division.

Captain E. V. Harbeck, Assistant Chief, Inspection Division.

Captain Oakley G. Kelly, Technical Supervisor, Fairfield Air Depot Control Area.

Captain Henry H. Reily, Technical Supervisor, Middletown Air Depot Control Area.

In addition to the above changes, one enlisted clerk has been authorized for each of the Technical Supervisors.

---oOo---

PROMOTION OF AIR CORPS OFFICERS

Special Orders of the War Department, recently issued, announced the promotion of forty Air Corps officers, one to the grade of Major, one to Captain and the remaining 38 to First Lieutenant.

Captain Thomas S. Voss was promoted to Major, with rank from August 1, 1935, and 1st Lieut. James E. Parker to Captain with rank as of the same date.

Second Lieutenants promoted to First Lieutenant were Edward W. Anderson, rank from July 10, 1935; John C. Covington, rank from July 13, 1935; Winslow C. Morse, also to rank from July 13th, and the following with rank from August 1, 1935, viz: Casper P. West, William L. Kennedy, Jesse Auton, John P. Ryan, Albert W. Shepherd, Robert S. Macrum, Charles L. Munroe, Jr., Llewellyn O. Ryan, William R. Morgan, Philo G. Neisenholder, John W. Egan, Hamilton H. Van Luken, Robert O. Cork, William C. Mills, Herbert H. Tellman, John A. Gerhart, Harold L. Mace, Elder Watteson, Francis H. Griswold, Leon R. Brownfield, Robert W. Burns, Daniel W. Jenkins, William M. Prince, Clarence F. Hegy, James P. Newberry, Stoyte O. Ross, Joseph W. Baylor, William J. Clinch, Jr., James McK. Thompson, Gerald Hoyle, Arthur F. Merewether, Jarred V. Crabb, Tom W. Scott, Lawrence C. Westley and John H. Davies.

---oOo---

A NEW SEAPLANE DISTANCE RECORD

An Italian seaplane, the Cant Z.501, a four-seater reconnaissance and light bombing flying boat, set up a new world's record for seaplanes by flying on July 16-17 from Monfalcone, Italy, to Berbera in British Somaliland, a distance of 4,966 kilometers (3,080 miles). It looks as if the letter "t" in the model designation of this seaplane is decidedly superfluous.

V-6851, A.C.

B I O G R A P H I E S

COLONEL HENRY W. HARMS

Ever since he became affiliated with the Aviation Branch of the Army, Colonel Henry W. Harms' services have been, for the most part, closely associated with the technical part of it. During his career as an Air Corps officer, he has served on numerous technical boards and committees, among them being the Air Service Advisory Board, the Aeronautical Board, Ordnance Technical Committee, Division of Federal Relations of the National Research Council, Chemical Warfare Technical Committee, Joint Army and Navy Technical Board, etc. His services were constantly in demand on technical questions relating to the design and manufacture of airplanes and accessories.

Col. Harms was born at Wentworth, South Dakota, November 25, 1887. Until 1906 he attended grammar and high schools. After pursuing a course of instruction at the University of Minnesota for one year he received an appointment as cadet at the United States Military Academy. Upon graduation from West Point June 12, 1912, he was commissioned a 2nd Lieutenant and assigned to the 9th Cavalry. He served as a Cavalryman until the end of 1914, and was then detailed to the Aviation Section, Signal Corps, receiving his flying training at the Signal Corps Aviation School at San Diego, Calif. He qualified as a Junior Military Aviator on July 13, 1915, and was rated Military Aviator three years later.

Shortly following the completion of his flying training, he pursued a course in Aeronautical Engineering at the Massachusetts Institute of Technology at Cambridge, Mass. He subsequently served as a member of the 1st Aero Squadron while it was stationed at San Diego, Calif.; Fort Sill, Okla., and Brownsville, Texas. During the World War, Col. Harms served some 14 months overseas, of which five were in the Technical Department, Air Service, A.E.F., Paris, France; and nine as Officer in Charge of the Technical Division in the Office of the Aviation Officer, London, England.

Upon his return to the United States from overseas duty, he reported on February 21, 1919, to the Office of the Director of Air Service, Washington, D.C., and was assigned to the Technical Section. The following month he was transferred to the Air Service Engineering Division at McCook Field, Dayton, Ohio, for duty in the Airplane Branch. In April, 1920, he returned

to Washington, to take up his duties as Assistant Chief of the Supply Group, office of the Chief of Air Service. Assigned as Washington representative of the Air Service Engineering Division in October, 1921, he served in this capacity for two years, when he was transferred to Langley Field, Va., for duty as student at the Air Service Tactical School. Following his graduation in June, 1925, he remained at Langley Field on duty as Executive Officer of the post and later as Instructor at the Tactical School until August, 1926, when he returned to Washington to pursue the one year's course at the Army Industrial College. Upon the completion of this course in June, 1927, he was on duty for several weeks as Chief of the Information Division, Office of the Chief of the Air Corps, and was then assigned as Chief, Experimental Engineering Branch and Industrial War Plans Branch, Materiel Division, Liaison Section, Office of the Chief of the Air Corps.

In December, 1929, Col. Harms was transferred to the Philippines, and during his tour of duty in the Islands he served for the most part as Air Officer of the Philippine Department. He was also in command of Nichols Field and of the 4th Composite Group. Upon the termination of his service in the Philippines, he was assigned to the Primary Flying School at Randolph Field, Texas, where he served as Executive Officer and Assistant Commandant.

At present, he is Commandant of this so-called "West Point of the Air". By virtue of his occupancy of this important assignment, he holds the temporary rank of Colonel.

---000---

LIEUT. COLONEL HARVEY B. S. BURWELL

An efficient and energetic officer, Lieut. Colonel Harvey B.S. Burwell, was commended on many occasions during his career as an Air Corps Officer, both by his superiors in his branch of the service, and by inspecting officers, for the superior and painstaking manner in which he carried out the many and varied duties assigned to him.

Born in Winsted, Conn., April 4, 1890, Lieut. Colonel Burwell, following his graduation from Norwich University, served as a 1st Lieutenant, 1st Cavalry, Vermont National Guard. He was appointed a 2nd Lieutenant, Regular Army, October 4, 1913, and was assigned to the 13th Cavalry. After four years as a Cavalryman, he applied for and was detailed to the Aviation Section, Signal Corps, in June, 1917, receiving his

flying training at the Signal Corps Aviation School at San Diego, Calif. He was promoted to 1st Lieutenant July 1, 1916; to Captain, May 15, 1917, and to Major, Air Service, July 1, 1920. During and after the War, he held the temporary rank of Lieutenant Colonel in the Air Service between August 20, 1918 and February 19, 1920.

Assigned to duty at Kelly Field, Texas, in July, 1917, Lieut. Colonel Burwell, at different periods, commanded the 34th, 43rd and 49th Aero Squadrons. While at this field he also performed such duties as Officer in Charge of the School for Flying Cadets, Officer in Charge of Cross-country Stage and Officer in Charge of Flying, being engaged on this latter duty from November 11, 1917, to February 28, 1918, and receiving high commendation for the excellent results achieved under his direction in turning out many efficient fliers with a minimum number of accidents.

In May, 1918, he was transferred to Ellington Field, Houston, Texas, and, after several weeks' instruction in aerial gunnery and bombing, he was assigned to Rockwell Field, Calif., as Officer in Charge of Aerial Gunnery. He remained at this post until the end of February, 1919, when he was assigned as Commanding Officer of Love Field, Dallas, Texas. While at Rockwell Field, his development of a wonderfully efficient unit of advanced pursuit aerial gunnery brought forth high commendation from the Director of Air Service.

Ordered to duty in the fall of 1920 with the Army of Occupation in Germany, Lieut. Colonel Burwell was in charge of the Flying Station and the Air Corps Detachment at Weissenthurm, Germany, until August, 1922, when he returned to the United States and was assigned to duty in the Training and War Plans Division, Office of the Chief of Air Service, Washington, D.C. In March, 1923, he was transferred to Kelly Field, where he performed vari-

ous duties, such as Wing Operations Officer, Information Officer, Wing Officer in Charge of Flying, Wing Engineering Officer, Wing Maneuvering Officer and Airways Control Officer. He was placed in command of the Third Attack Group on June 25, 1924, and developed this organization to a high state of efficiency.

Transferred from Kelly Field in August, 1925, Lieut. Colonel Burwell's duties for more than a year thereafter carried him to Rockwell Field, Washington, Mitchel Field, and the Air Corps Engineering Division at McCook Field, Dayton, Ohio, he being engaged on matters connected with supplies and equipment utilized by Attack aviation and with the inspection and maintenance of airplanes. It was through his pioneering work that the present visual inspection system of airplanes now utilized by the Air Corps was developed. After serving at McCook Field as Air Corps Inspector, from July 1, 1926, to February 23, 1927, he was assigned as Commanding Officer of Bolling Field, D.C. In February of the following year he returned to the West Coast and assumed the duty of Executive Officer of Crissy Field, Calif.

From September, 1928, to July, 1931, he was on duty as Assistant Professor of Military Science and Tactics at the University of California, Berkeley, Calif. In the fall of 1931, he was assigned as student at the Air Corps Tactical School at Langley Field, Va., and upon his graduation in June, 1932, served another year as a student officer at the Command and General Staff School at Fort Leavenworth, Kansas. After graduating from Fort Leavenworth, Lieut. Colonel Burwell assumed the duty of Air Officer, 7th Corps Area, Fort Omaha, Nebraska, where he served until his assignment on March 1, 1935, to his present duty as Assistant Chief of Staff, G-1, General Headquarters Air Force, Langley Field, Va., which position carries with it the temporary rank of Lieut. Colonel.

---oOo---

PARACHUTE HAPPENINGS ACROSS THE SEA

The British aeronautical publication, **THE AEROPLANE**, records two recent exciting episodes in connection with practice parachute jumps. It goes on to say: "In Russia, where there is a national mania for parachute-jumping, Comrade Rikaloff jumped from a machine and pulled the rip-cord too early. His parachute became entangled in the tail of the airplane. He could not get himself free, so a mechanic, Comrade Evlampioff, crawled out to the tail and

dropped tools to Rikaloff, which he failed to catch. Comrade Evlampioff climbed back to the cockpit and emerged shortly afterwards with a piece of iron on the end of a wooden pole. With this crude weapon he worked for 25 minutes at the tangled silken lines. Finally Rikaloff dropped clear and was able to land safely with his emergency parachute.

An equally exciting accident occurred to Mr. Dennis Smith, a young man who had

(Continued on page 14)

CLASSES TO BE RESUMED AT AIR CORPS TECHNICAL SCHOOL

Classes are to be resumed at the Air Corps Technical School at Chanute Field, Rantoul, Ill., the first of which will get under way on September 3rd. Student officers have started to arrive from various stations over the United States, and enlisted students are soon to arrive. In addition, 250 unassigned men are being enlisted, this work having started in July, in which month 63 unassigned men were enlisted. It is contemplated that a similar number will be enlisted in August and so on each month until 250 have been enlisted. These men will be assigned to courses starting throughout the school year.

Classes are to start in all departments of the school, including the communications course, which was conducted at Fort Monmouth, N.J., the last school year. This course was offered at the Signal Corps School in New Jersey when reduced equipment and lack of room, following two disastrous fires, brought about the belief that the course could be offered better elsewhere. After the lapse of a year, this department of the School has been returned, adequate space having been arranged at Chanute Field and considerable new equipment obtained.

Funds were expended during the summer for the repair of the old buildings at this post and new equipment purchased, and it is believed that when classes are resumed in September the facilities will be better than for a long time.

In May The Adjutant General of the Army designated the classes to start at Chanute Field this fall and in 1936, some of which will not be concluded until 1937. The names of the courses, along with the starting and closing time, are as follows:

Maintenance Engineering - Armament.
Regular Army Officers, September 3, 1935, to June 30, 1936.

Communications. Regular Army Officers, October 1, 1935, to June 30, 1936.

Photographic. Regular Army Officers, September 16, 1935, to June 30, 1936.

Maintenance Engineering. National Guard and Reserve Officers, April 1, 1936, to June 30, 1936.

Aircraft Armament. National Guard and Reserve Officers, September 3, 1935, to November 30, 1935.

Communications. National Guard and Reserve Officers, April 1, 1936, to June 30, 1936.

Airplane Mechanics. Regular Army Enlisted Specialists:

September 3, 1935 to May 15, 1936
October 7, 1935 to June 19, 1936
November 4, 1935 to July 17, 1936
December 2, 1935 to October 16, 1936
January 6, 1936 to November 13, 1936
February 3, 1936 to December 11, 1936
March 2, 1936 to January 16, 1937
April 6, 1936 to February 20, 1937
May 4, 1936 to March 28, 1937

Aircraft Armorers. Regular Army Enlisted Specialists:

September 3, 1935 to February 21, 1936
November 4, 1935 to April 24, 1936
January 6, 1936 to June 19, 1936
March 2, 1936 to October 16, 1936
May 4, 1936 to December 18, 1936

Aircraft Machinists. Regular Army Enlisted Specialists:

October 7, 1935 to March 27, 1936
December 2, 1935 to May 22, 1936
February 3, 1936 to July 17, 1936
April 3, 1936 to November 20, 1936

Aircraft Welders-Sheet Metal Workers. Regular Army Enlisted Specialists:

September 3, 1935 to February 21, 1936
November 4, 1935 to April 24, 1936
January 6, 1936 to June 19, 1936
March 2, 1936 to October 16, 1936

Parachute Riggers. Regular Army Enlisted Specialists:

September 3, 1935 to October 25, 1935
November 4, 1935 to January 3, 1936
January 6, 1936 to February 28, 1936
March 2, 1936 to April 24, 1936
May 4, 1936 to June 26, 1936

Air Corps Supply and Technical Clerks. Regular Army Enlisted Specialists:

September 3, 1935 to January 24, 1936
February 3, 1936 to June 19, 1936

Photographic. Regular Army Enlisted Specialists:

November 4, 1935 to July 17, 1936
January 6, 1936 to November 13, 1936
March 2, 1936 to January 9, 1937
May 4, 1936 to March 28, 1937
June 1, 1936 to April 4, 1937

Radio Mechanics and Operators. Regular Army Enlisted Specialists:

September 3, 1935 to March 20, 1936
October 7, 1935 to April 24, 1936
December 2, 1935 to June 19, 1936
January 6, 1936 to July 18, 1936
February 3, 1936 to October 16, 1936

March 2, 1936 to November 13, 1936
April 6, 1936 to December 18, 1936
May 4, 1936 to January 25, 1937

June 1, 1936 to February 22, 1937

Airplane Instrument Inspection and Maintenance. Regular Army Enlisted Specialists:

September 3, 1935 to October 25, 1935
November 4, 1935 to January 3, 1936

---oOo---

PURSUIT MANEUVERS AT FORT BENNING, GA.

The 35th Pursuit Squadron, Langley Field, Va., brought up to 18-ship strength by using 8 planes from the 36th Pursuit Squadron, left August 3rd for Fort Benning, Ga., to demonstrate Pursuit tactics to the West Point cadets. Landings were made at Pope Field, N.C., and Atlanta, Ga., for the purpose of refueling, and the Squadron arrived at Fort Benning in the afternoon.

On the following day the Squadron gave a 20-minute demonstration of string and vee maneuvers, followed by an attack on

a formation of A-8 Attack planes from Barksdale Field, La.

The 35th Pursuit Squadron returned to Langley Field the same day and since that time has been engaged in preparing for Field Exercises at Virginia Beach, Virginia.

Two days prior to the Pursuit demonstration, the West Point Cadets at Fort Benning witnessed a Bombing demonstration staged for their benefit, the 2nd Bombardment Group from Langley Field sending a composite Squadron to the site of the Infantry School. Each of the Bombardment Squadrons at Langley Field furnished one flight of three planes, six officers and enlisted men.

---oOo---

AERIAL GUNNERY BY 4TH OBS. SQUADRON

The 4th Observation Squadron, Luke Field, T.H., spent the period from July 8th to 24th in the field training camp at Waimanalo. Front and rear gunnery missions were fired with unusual success. All of the officers, with one exception, qualified as "Expert" in both fixed and flexible guns. High score in both cases was made by Capt. Upthegrove, 951 - fixed gun and 1079 - flexible gun.

The Squadron average was: Pilots' Course - 700.04, Observers' Course - 945.07. Eight O-19's were taken to Bellows Field for use in gunnery. The period of duty at Waimanalo was enlivened by horse shoe tournaments, both singles and doubles, and daily baseball games. These activities and the good swimming facilities made the stay at the camp very enjoyable.

---oOo---

PARACHUTE HAPPENINGS (Continued from Page 12)

already got himself into the limelight by jumping three times in an afternoon. On this occasion he was about to jump when the wind twisted his scarf round a strut. As a result he was almost strangled and became unconscious. His pilot, Mr. C.M. Glover, Chief Instructor of the Southend Flying Club (Eng.) stood up in the cockpit, caught Smith by the harness, cut the scarf with a knife, and held his body across the cockpit. Holding it there with his right hand, he brought the machine down safely with one hand and his knees.

Mr. Smith quickly recovered."

---oOo---

CAMOUFLAGING OF AIRPLANES

The News Letter Correspondent from Wheeler Field, Hawaii, submitted a very interesting article on some valuable experience gained by the 18th Pursuit Group in the camouflaging of airplanes and ground installations during the

June maneuvers in the Hawaiian Department. The camouflage was used in connection with operations in the field and a good service test resulted. Squadrons were encouraged to exercise initiative and originality.

To conserve material during the preliminary studies, two 3-ft. model airplanes were constructed for experimental camouflage, painted with the Air Corps standard camouflage and later tried with many color combinations and arrangements. Following these experiments, the studies were transferred to full size airplanes.

The complete article will be mimeographed and distributed by the Information Division to the service.

---oOo---

TEMPORARY PROMOTION OF AIR CORPS OFFICERS

To Lieut.-Colonel

Major Hubert R. Harmon, Executive and Operations Officer, 1st Wing, March Field.

To Major

Captain Russell C. MacDonald, C.O., 2nd Transport Squadron, Middletown Air Depot.

Captain John F. Richter, C.O., 3rd Transport Squadron, San Antonio Air Depot.

Captain Harold H. Carr, C.O., 4th Transport Squadron, Rockwell Field, Calif.

To Captain

1st Lieut. Francis M. Zeigler, Flight Commander, 1st Transport Squadron, Fairfield Air Depot.

1st Lieut. Samuel R. Harris, Jr., Flight Commander, 1st Transport Squadron, Wright Field, Ohio.

1st Lieut. Charles A. Bassett, Engineer Officer, 4th Transport Squadron, Rockwell Field, Calif.

1st Lieut. John T. Murtha, Jr., Supply Officer, 4th Transport Squadron, Rockwell Field, Calif.

1st Lieut. Reuben C. Hood, Jr., Adjutant 3rd Wing, Barksdale Field, La.

---oOo---

The following-named officers, upon the expiration of their tour of duty in the Hawaiian Department, will proceed to the stations designated for duty:

Captain Murray C. Woodbury, 1st Lieut. Lauris Forstad to Selfridge Field, Mich.

1st Lieut. Russell H. Griffith to Chanute Field, Ill.

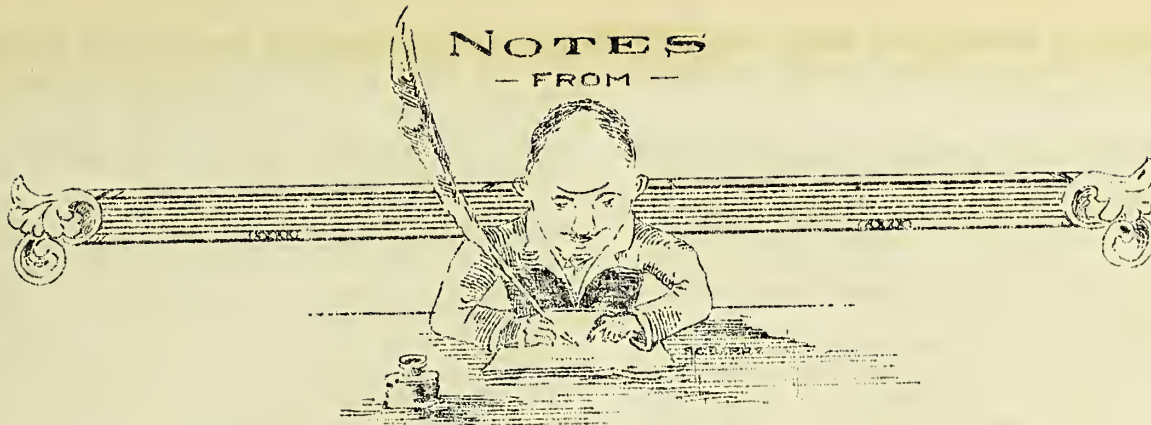
1st Lieuts. Louis A. Guenther, Robert Stunkard and Donald N. Yates to 12th Obs. Group, Brooks Field, Texas.

Lieut.-Colonel Edward L. Hoffman, Commanding Officer, Brooks Field, Texas, is under orders to proceed to Maxwell Field, Ala., for duty as student at the Air Corps Tactical School.

Orders assigning Captain Orvil A. Anderson, Kelly Field, to Maxwell Field, Ala., for duty as student at the Tactical School, have been revoked.

NOTES

— FROM —



AIR CORPS FIELDS

March Field, Riverside, Calif.

Things must be picking up for civilian aviation. The latest of the Army Air Corps Reserve pilots to drop the controls of an Army "ship" to pick up those of a commercial air liner is George C. Kruse, until lately a member of the Golden Bear outfit, the 73rd Attack Squadron. Lieut. Kruse and his young wife will be missed by the younger social set at the headquarters post of the First Wing.

Capt. A.J. Kerwin Malone, recently appointed 17th Attack Group Athletic Officer, is booming the new sport, nightball, for all it is worth. An intra-mural league was formed in the early part of the season with the "A" team of the Station Complement romping off with the championship. Another schedule was drawn for the remainder of the season to satisfy the revengeful spirit of the Attack and Service Squadrons.

A month or so ago, Capt. Malone realized the need of a post softball team for night play, so he organized one from the personnel of the squadron nines. This team, while not markedly successful, has made a fair showing and hopes for a greater percentage of victories have been raised.

Two officers from Barksdale Field, Captains Thurston H. Baxter and Manning E. Tillery, were stranded at March Field temporarily, after delivering airplanes from the Louisiana post to March Field, because of a lack of available air transportation to take them back home. They finally went home by official air transportation.

The weather may be hot in the Orange Belt, but that does not deter four Air Corps men from March Field from getting their full quota of recruits for Uncle Sam. The Recruiting quartet consists of 1st Lieut. Ernest H. Lawson, Sergeants Richard H. McLeroy, Charles D. Graw and Pvt. 1st Cl. Marcus H. Baldwin.

Chanute Field, the home of the Air Corps Technical School, is attracting its

share of March Field enlisted men these days. Men detailed to attend the Illinois institution of learning are Pvt. Elvin L. Eib, Airplane Mechanics; Pvt. Herman Heise, Radio Course; Pvt. 1st Cl. Frederick C. Stewart, Clerical Course, and Pvt. 1st Cl. Hugh A. Wennerholm, Photographic Course.

Another young soldier who will travel East to school is Pvt. Kenneth C. Stanley, who will attend the Meteorological Course at the Signal School at Fort Monmouth, New Jersey.

Five of the 40 enlisted pilots recently appointed second lieutenants in the Air Corps, Regular Army, were assigned to March Field, viz.: Lieuts. Harry Crutcher, Joseph C. Moore, Clair I. Wood, Carl Swyter and Jasper N. Bell. Lieut. Bell was attached to the 73rd Attack Squadron, and Lieut. Swyter was appointed Provost Marshall and Police and Prison Officer.

March Field's quartermaster detachment was increased in size to 38 men. 1st Lieut. Guy Hix, Air Corps, was placed in command of the Quartermaster troops of this detachment.

Hamilton Field, San Rafael, Calif.

Lieutenant Colonel Clarence L. Tinker, Air Corps, appeared before a promotion examining board at Station Hospital, Presidio of San Francisco, California, to determine his fitness for promotion.

The following named Air Corps officers appeared before a promotion examining board convened at this station to determine their fitness for promotion to the next higher grade: 1st Lieuts. Kenneth N. Walker, John G. Moore, James W. Spry, Edgar Noyes; 2nd Lieuts. Aubrey K. Dodson, Birrell Walsh, Marvin L. Harding, Millard Lewis, Edward W. Suarez.

Major W.B. Hough, Air Corps, in addition to his regular duties, was appointed Agent Finance Officer during temporary absence of 2nd Lieut. Robert E. Cron, Jr., Q.M.C., on leave of absence for a period of two months.

Captain F.L. Anderson, Jr., Air Corps, was appointed Officer in Charge of S E R A activities.

Major Guy Kirksey, Air Corps, was granted leave of absence for one month, effective August 20th.

San Antonio Air Depot, Duncan Field, Texas

Colonel and Mrs. John H. Howard departed August 7th on a two months' leave of absence in Honolulu. In Col. Howard's absence, Major Morris Berman is in temporary command of the Depot.

Captain Max F. Schneider, on leave of absence prior to transfer from the Office of the Chief of the Air Corps to Maxwell Field, Ala., was an informal visitor at this Depot on August 6th.

Captain J.P. Richter was promoted to the temporary rank of Major, as commander of the 3d Transport Squadron, this Depot, by War Department orders, effective Aug. 17.

Among recent visitors to this Depot, ferrying airplanes to or from their home stations, were Lieuts. T.A. Sims and H.H. Couch, with Mr. A.W. Ham as passenger, all of Wright Field, Ohio; Capt. V.J. Meloy and Lieut. J.L. Jackson, Fort Leavenworth, Kans.; Lieut. Col. Wm.O. Ryan and Majors R.B. Davidson, S.F. Landers and E.H. DeFord, with enlisted mechanics, Staff Sgt. A.J. Olszanowicz, Sgt. W.M. Atkinson, and Pvt. J.W. McInvale, all of Maxwell Field, Ala.; Lieuts. W.N. Allison and R.N. Read, Langley Field, Va.; Capt. Walter E. Todd, Selfridge Field, Mich., piloting a C-19, with Lieuts. C.H. Anderson and F.G. Jamison as passengers.

The following Reserve officers have been placed on active duty for training at this Depot:

Maj. Thomas H. Jarrell, Air-Res., San Antonio (Executive Assistant to the District Director, Southwest District of Texas, Federal Housing Administration), for 14 days beginning Aug. 11, this being his third tour here.

Maj. Ralph W. Stone, Air-Res., temporarily residing in San Antonio (Pilot, Pan-American Airways, Brownsville, Texas), for 10 days, effective Aug. 19 (his second tour at the Depot).

Capt. Caleb W. Waterman QM-Res., of Houston, Texas (Commerce Agent, Freight Traffic Department, Southern Pacific Lines), Aug. 18 to 21.

Lieut. J.H. Hicks and family of this Depot departed on a vacation of one month and 18 days to be spent on the Willits Ranch, Big Horn, Wyoming.

Mr. Sgt. C.P. Smith and Staff Sgt. T.K. Dorsett, pilots of the 3d Transport Squadron, this Depot, flew two transports to Barksdale Field, La., Aug. 10, where they were joined by pilots in two other transports from Wright Field, for the purpose of ferrying 51 enlisted mechanics to the 55th Pursuit Squadron at Langley Field, Va., for participation in the tactical exercises held there by the G.H.Q. Air Force. All

planes left Barksdale Field before daylight on the 11th and made it through to Langley Field the same day, except Sgt. Smith, who was detained over night at Atlanta, Ga., due to engine trouble. Sgts. Smith and Dorsett returned here the 16th.

Three additional enlisted men, Pvts. C.B. Hetherington, Wm.B. Harrison and H.L. Walker, all from the 68th Service Squadron, Kelly Field, were transferred to the new 3d Transport Squadron at the Depot during August, bringing its enlisted strength up to 15.

An interesting Golf Day was held on Sunday, August 4, by the Air Corps Golf Association, Duncan Field. Lieut. F.H. Smith playing Capt. E.H. Underhill, both of Kelly Field, won the Annual Association Championship on the 36th hole, thereby gaining the Annual Championship Cup awarded by the First State Bank of South San Antonio. In the Kickers Tournament, in which three clubs only were used, Lieut. E.S. Ligon, Kelly Field, won in the Men's Division, with Lieut. J.B. Cary, of that field as runner-up; in the Women's Division, Mrs. R.F.C. Vance, Kelly Field, was winner, with Mrs. J.R. Browne, Kelly Field, in second place, and Mrs. J.P. Richter, Duncan Field, third place. The Men's Driving Contest was won by Lieut. E.J. Timberlake, Kelly Field, with the best drive, 235 yards; Capt. W.H. Hardy, Kelly Field, was second, and Capt. L.D. Weddington, Randolph Field, third. Mrs. J.P. Richter, won the women's Putting Contest, with Mrs. J.M. Thompson, Normoyle Q.M. Depot, second, and Mrs. D.J. Ellinger, Duncan Field, third. Luncheon, served to about 60 guests, brought the occasion to an enjoyable close.

Selfridge Field, Mt. Clemens, Mich. Aug. 17th.

Having completed one year's duty as flying cadets with a tactical organization of the Air Corps at this station, Allan T. Bennett, George A. Hatcher, J. Stanley Holtner, Rodney E. Jones, and Joe G. Schneider were commissioned second lieutenants, Air Corps Reserve, as of July 1st, for station at this field.

Among the many visitors at this post during the past several weeks were: Lieut. Colonel Joseph T. McNarney, Air Corps, a staff member of Headquarters GHQ Air Force; Major Cedric W. Lewis, Signal Corps, stationed at Langley Field, Virginia; Captain Hoyt L. Prindle, Air Corps, a staff member of the 2nd Wing, GHQ Air Force; and Major Kanda of the Japanese Army.

On the night of Aug. 3d, Pvts. James P. Kennedy and Stephen Schertzer, members of the 94th Pursuit Squadron, Air Corps, and a civilian from Mount Clemens, Michigan, were seriously injured when the automobile in which they were riding, and which Pvt. Schertzer was driving, crashed into a truck without lights, about midnight. The three were taken to St. Joseph Hospital in Mount Clemens, and later Pvt. Kennedy was removed to the post hospital, where he died on the morning of

Aug. 4th, as a result of his injuries. Pvt. Schertzer is recovering.

1st Lieut. Edgar Ricen, U.S. Navy (M.C.), Miss Lydia Kaye, and Miss Opal A. Stevenson, nurses, arrived on the post August 5th for duty in connection with the Civilian Conservation Corps, and were attached to the post hospital for administrative purposes. Lieut. Ricen and Nurses Kaye and Stevenson had been stationed at Fort Wayne, Michigan.

The following officers departed on Aug. 6th in a "Condor" for Langley Field, Va., to participate in tactical maneuvers of the GHQ Air Force at Virginia Beach: Maj. James E. Parker; Capts. Frank J. Coleman, Daniel C. Doubleday; 1st Lieut. Charles H. Anderson; 2nd Lieuts. Charles D. Manhart, Lloyd H. Bidwell, John A. Way, Herman E. Hurst, Jesse Neal, Allan T. Bennett, George A. Hatcher, and Joe G. Schneider. A "Keystone" from Langley Field followed with their baggage.

1st Lieut. Maurice F. Daly and 2nd Lieut. Dyke F. Meyer, Air Corps, have been on duty with the 1st Pursuit Group for the purpose of maintaining their flying proficiency. Both officers departed the week end of Aug. 17th, for West Point, N.Y., their regular station, after having been on duty for two months with the Group.

The following Air Corps officers were recently welcomed as members of the post: 2d Lieuts. Edward S. Allee, Arnold T. Johnson, Harold L. Neely, Raymond P. Todd, Lester S. Harris; and 2d Lieuts. Air Reserve, John P. Spake, Donald B. Diehl, John S. Fauche and Edward G. Kiehle.

The Selfridge Field Baseball team, on August 18, 1935, closed a successful baseball season, with 13 victories and 7 defeats, having taken into camp such strong Michigan Class "A" teams as the Port Huron Grand Trunk, Redford A.C., Strohs Beer of Detroit, Bower Roller Bearing of Detroit, Grand Trunk of Detroit, and East Detroit Aces, by very close scores. The fliers dropped two games to the Flint, Mich., Trucking Company, last year's State champions, by the scores of 5-6 and 1-3. The Grand Trunk team of Port Huron defeated the fliers in the first game of the season 5-6 in twelve innings. The fliers later avenged this defeat by downing the Trunks 2-1 and 5-0. The Oklahoma AC of Detroit, a Class B team was defeated 11-2. In competition with service teams, the fliers defeated Fort Sheridan 16-1, and Jefferson Barracks, 4-1. They lost to Scott Field 4-6, and to Fort Hayes, Ohio, 3-6. Prior to the close of the season, the fliers won their last four games, defeating the Mt. Clemens league leaders - Rosso Sport Shop, 2-1; the Mack Cartage team, of Detroit, 3-2, and Scott Field, twice, by the same scores of 10-2.

France Field, Canal Zone, Aug. 16.

The 25th Bombardment Squadron returned to the gunnery range at Rio Hato, R. de P., in order to complete firing for record.

Major Willis R. Taylor, Operations Officer, France Field, is on leave in South America as a guest of American pilots flying the South American Air Lines.

The France Field Basket ball Squad, under the efficient coaching of Lieuts. Cousland and Epler, and the playing of the latter at center, won the Atlantic Sector championship in a three way play-off with Ft. Sherman and Ft. Randolph, and will play three games with the Pacific champions, Ft. Amador, for the Department championship.

Lt. John M. Price sailed on the U.S.A.T. Grant for detached service at the U.S. Military Academy.

Luke Field, T.H., Aug. 3.

Major Frank H. Pritchard assumed command of the Field during the temporary absence of Lt. Colonel Asa N. Duncan, who departed for two weeks' detached service at Kilauea Military Camp, Hawaii.

Lieut. D.E. Altman married - June 20th at 7:45 PM. Wife was formerly Mildred Capener of Salt Lake City, Utah. Ceremony took place at Latter Day Saints Chapel in Honolulu.

Lieut. Chester Gilger left the 72d Bombardment Squadron to take over the duties of Group Communications Officer, relieving Capt. Harry G. Montgomery who will soon leave for his new station at Rockwell Field, Calif.

Lieut. William G. Beard was recently transferred to the 72d Bombardment Squadron from the 23d Bombardment Squadron to be Squadron Communications Officer vice Lieut. Emery S. Wetzel, who is now Squadron Engineering Officer.

At the present time the following officers are assigned or attached to the 72d Bombardment Squadron: Major J.V. Hart; Captains Ford J. Lauer, Charles F. Born, Waldine W. Messmore, Reginald Heber, Lewis R. Parker, 1st Lieuts. Emery S. Wetzel, Chester P. Gilger, William G. Bowyer, Louis A. Guenther, John J. Hutchison, William G. Beard, 2nd Lieuts. Clifford H. Rees, James W. Gurr, William L. Travis, Travis M. Hetherington, Harry S. Bishop, Charles H. Pottenger, Cady R. Bullock and Henry R. Spicer, the two last named officers being in the Air Reserve.

Capt. Robert W. Warren is the proud father of a new recruit in the Air Corps, born July 5th.

Hawaiian Air Depot, Aug. 3.

Depot operations for the past month consisted of routine overhaul, repair work for the Fifth Composite Group, and repairs to airplane and engine equipment and accessories. The present production schedule of the Engineering Section is being successfully maintained.

The Douglas Amphibian OA-4A is expected to be back in service and ready for the Congressional Party due to arrive in this Department on Aug. 20th. The blue fuselage and the yellow surfaces cause that plane to stand out very much against the background of olive

drab in use on other planes in this Department.

There was an increase of several civilian employees during the past month including Clerks, Typists, Engine Mechanics and Aircraft Seamstresses.

Tactical Organizations are holding annual target practice at Bellows Field, Waimanalo. The Supply Department has been confronted with the problem of transporting gasoline from Luke Field to meet requirements for these exercises, because of the limited storage space at that station. This is now being successfully accomplished by the use of commercial gasoline tank trucks, as the standard servicing trucks are either out of commission, or being used at the home stations.

2nd Lieut. H.S. Bishop was assigned to the Supply Department as Assistant Supply Officer.

Among recent improvements in the Supply Department is a centralized filing unit which has been established between the office and the Shipping and Receiving Unit. This permits the consolidation of files, thereby eliminating the duplicate files of blue prints, technical orders, etc., normally carried in the Warehouse. The offices of the Warehouse Superintendent, Inspector and Shipping and Receiving Supervisor are adjacent to this Unit.

Nichols Field, P.I.

Indoor sporting interest in the Philippines centers around bowling and basketball. During the rainy season, considerable interest is taken in basketball, but the basketball enthusiasts at Nichols Field seem to be in the minority. Bowling, however, has brought fame to the Air Corps for the past three years, and there is some likelihood of repeating again this year. During the past three years Nichols Field has won nine championships including the championship of the Philippine Islands.

There are three major bowling leagues, namely, the Manila Bowling League, the Philippine Bowling Association and the Army Bowling League. Three times the Air Corps has captured top honors in all three leagues and now they are trying for the fourth consecutive year of championships.

In addition to the above named leagues, there is an inter-squadron league at Nichols Field. The 66th Service Squadron has already won the duck pin tournament and is now trying to repeat in the ten-pin league. The officers have a league of their own and also the Officers' Ladies. Even the children are given prizes for high scores.

The alleys are conveniently located in the Post Gymnasium, and are kept in excellent condition by the E. & R. There are four alleys and a good sized gallery for the spectators. Recently all four alleys were worked over, and they are now in perfect condition.

LIBRARY NOTES

Some of the more interesting Books and Documents recently added to Air Corps Library

C 20.3 U.S. 31. Organization, tactics, and reasons for the creation of the GHQ Air Forces, by Captain Edmund P. Gaines, 17p. 1935. Talk given at Charlotte, N.C.

D 52.19/19. Tailless gliders of the IXth all-union meet. Central aero-hydro-dynamic institute. Tr. B-8787. 19p. 1934. Tr. from Russian.

527 H 22. Glossary of navigation; a Vademecum for practical navigators, 3d edition, rev. and enlarged. 512p. March 1897.

629.1308 W89. Tales of the air, by R.S. Wortley. 160p. 1932. Stories of some interesting flights.

620.1341 F33. First over Rverest; the Houston-Mount Everest expedition, 1933. 264p. 1934. True purpose of flight was for scientific purposes. Not a flight to break records. Results proved sensational as well as of scientific interest.

629.1341 R33. Log of aeroplane NR-898W; experiences, comments, impressions of a flight from England to China, 1931-32, by Z.S. Reynolds. 59p. 1932.

92 St8. Recollections of an airman, by L.A. Strange. 224p. n.d. Author's experiences during the World War.
-----oOo-----

CHANGES IN STATION OF AIR CORPS OFFICERS

To Fairfield Air Depot, Ohio: Captain Russell H. Cooper from duty with 315th Obs. Sq. Hensley Field, Texas, and from further detail with Organized Reserves, 8th Corps Area.

To Hensley Field, Texas: Capt. Hansford W. Pennington for duty with Organized Reserves, 8th Corps Area. Relieved from temporary rank upon departure from Panama Canal Zone.

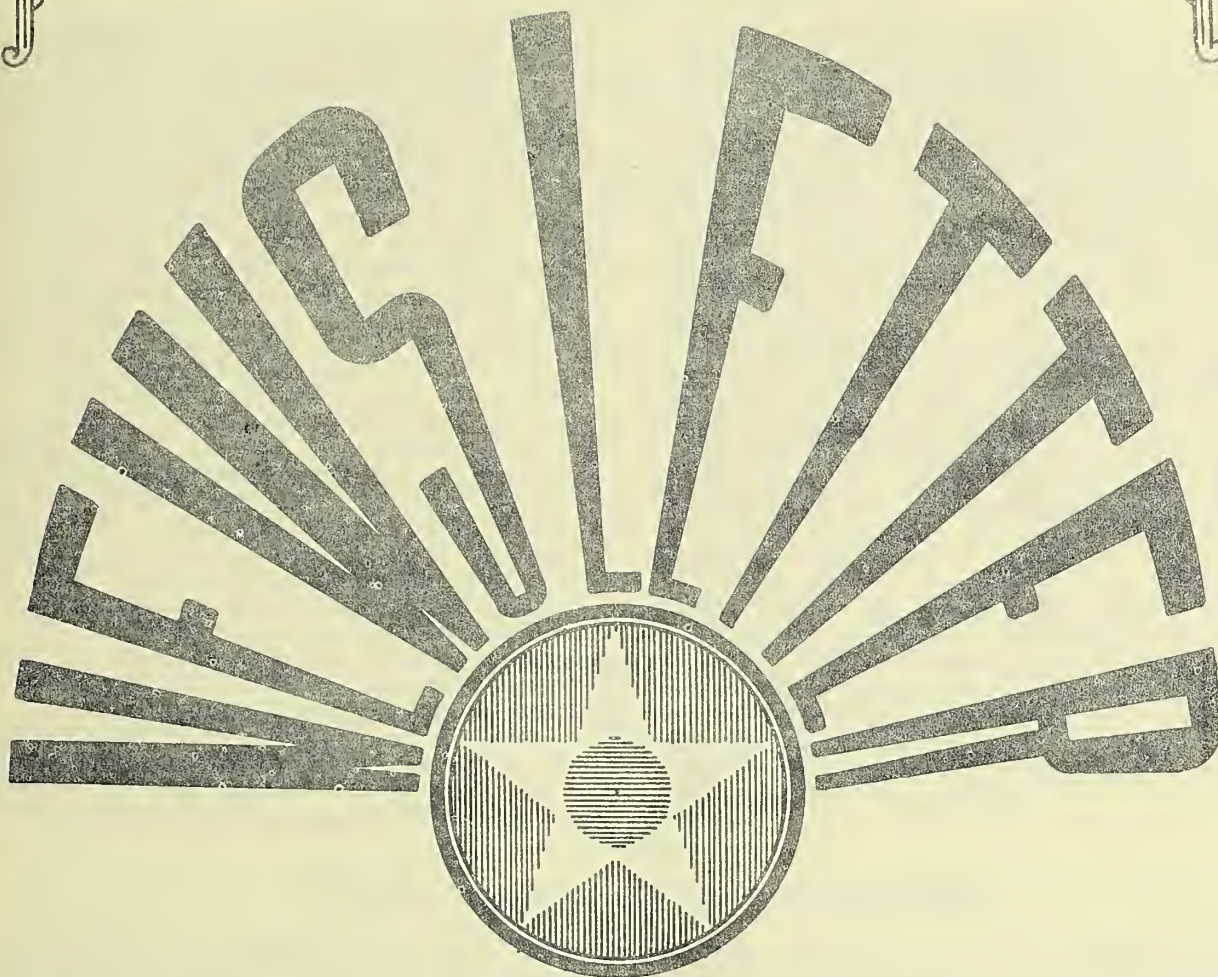
To Philippines: Captain Francis M. Zeigler from Fairfield Air Depot. Relieved from temporary rank December 31, 1935.

To Hot Springs, Ark.: Major Roderick N. Ott, Kelly Field, to Army & Navy General Hospital for observation and treatment.
-----oOo-----

Orders assigning 1st Lieut. Carl B. McDaniel, Randolph Field, for duty as student at Air Corps Tactical School, Maxwell Field, revoked.

Second Lieuts. John B. Ackerman, Coast Artillery, and Edward J. Hale, Field Artillery, were transferred to the Air Corps August 9, 1935, the former to rank from June 10, 1932, and the latter from June 13, 1933.

Captain Edwin D. Rawlings, 12th Observation Group, Brooks Field, Texas, is under orders to proceed to Wright Field for duty. He is relieved from temporary rank, effective 9-6-35.



DUNNINGTON

ISSUED BY
 THE OFFICE OF THE CHIEF OF THE AIR CORPS
 WAR DEPARTMENT WASHINGTON, D.C.
 SEPTEMBER 15, 1935

VOL. XVIII

NO. 17

Information Division
Air Corps

September 15, 1935

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

PRAISE FOR AIR CORPS TRAINING COURSE

Fourteen contact officers from the Hawaiian Division, representing Infantry, Artillery, Engineers and Tanks, completed on August 1st a 15-day course of training with the Air Corps. On the same day, another contingent of 14 officers, representing Infantry, Artillery, Tanks and Ordnance, began their course for a similar period of 15 days. The courses for these officers were carefully prepared to insure that their tour with the Air Corps at Wheeler Field, Schofield Barracks, T.H., would be both profitable and pleasant.

Practical demonstrations were the principal method of instruction, and as much actual flying was provided as the limited equipment available permitted. Every effort was made to present a true picture of our Air Corps today. At the end of the first course each contact officer made a report on the course, with comments and recommendations.

The success of this contact course may be judged from the various comments made by these officers as quoted below:

Lieut.-Colonel Thomas F. McNeill, 21st Infantry: "I was impressed with the care and the logical way in which the course was prepared. I do not see how the course could be much improved from

contact officer's standpoint. I have acquired a better perspective of the relative importance of the Air Corps, some appreciation of the magnitude of the problems that confront it, better understanding of its powers and limitations, an increased respect and sympathy for the officers who are engaged in working out these problems, and last a personally agreeable extension of my acquaintance among the officers of that branch."

Captain Frank N. Mallory, 27th Infantry: "Excellent course. Every Infantry officer should take this course."

Captain Doravan Yeuell, 19th Infantry: "The most illuminating and instructive inter-branch course I have seen, made noteworthy by the unfailing courtesy and keen interest of the instructors. Scope - excellent."

Captain J.J. Canella, 27th Infantry: "Superior. Have received more instructions and knowledge than any course taken. Well planned and so prepared to give one a general all around knowledge of the work done at Wheeler Field and Air Corps in general. Personally, the course was what I wanted, and I was interested in all phases."

---oOo---

BROTHERS GALORE IN AIR CORPS ORGANIZATIONS

An item in a recent issue of "The Military Service News," of San Antonio, Texas, is to the effect that with one pair of twins, who are so identical that even their parents have to look twice to determine definitely which is which, and three more sets of brothers, the Station Complement at Brooks Field, Texas, believes that it holds the Air Corps title for brothers in the Army.

While it is possible that Brooks Field may hold this particular record

at the present time, it cannot lay claim to the all-time record which, so far as known, appears to belong to Luke Field, Hawaii. Back in 1929, in April, the News Letter called attention to the fact that a survey of the personnel records of Luke Field disclosed eight pairs of brothers serving thereat, three pairs with the 65th Service Squadron, and five pairs divided among the remaining organizations stationed at this field.

---oOo---

1ST PURSUIT GROUP IN AIR RACES AT CLEVELAND

Having been authorized by the War Department to participate in the National Air Races at Cleveland, Ohio, the First Pursuit Group, Selfridge Field, Mt. Clemens, Mich., dispatched a Demonstration Flight of P-26A Pursuit airplanes to the Sixth City on the morning of August 30th.

Led by Lieut.-Colonel Ralph Royce, Commanding Officer of the First Pursuit Group, in a P-26A plane, 21 officers and 18 enlisted men proceeded to the scene of the annual American aviation classic. The pilots making the journey in the fast little P-26A's were, in addition to Lieut.-Col. Royce, Major George V-6857, A.C.

P. Tourtellot, Major Harlan T. McCormick, Captains Rudolph Fink, Morley F. Slaght, John M. Sterling, Hanlon H. Van Auken, Ernest K. Warburton, Earle E. Partridge, Norman R. Burnett, Alfred A. Kessler, Jr., Robert C. Oliver, Lee Q. Wasser, Dixon M. Allison, 1st Lieuts. William J. Bell, David W. Hutchison, and Paul W. Blanchard.

In a C-4A Transport, piloted by 1st Lieut. Ralph Read, with Captain Yantis H. Taylor as co-pilot, and which made two trips to Cleveland, the following personnel were carried: Major Irwin B. March, Medical Corps, Flight Surgeon; Captain Daniel C. Doubleday, Communications Officer and Contact Officer for Public Address System; 1st Lieut. Jarred V. Crabb, spare pilot in Demonstration Flight; Staff Sergeant Taylor C. Carr, 1st Pursuit Group Headquarters, Operations and Finance Clerk, Crew Chief of C-4A; Technical Sergeant William B. Townsend, Staff Sergeants Albert Rangel, Lionel C. Edwardes, Corporal Earl L. Kick, Crew Chiefs, and Private George H. Rainbolt, Radio Mechanic, all of the 94th Pursuit Squadron; Staff Sergeant John P. Milbourne, Crew Chief, 17th Pursuit Squadron; Staff Sergeants Ford M. Swiney, Oliver D. Edmonds, Earl S. Blesh, Sergeant Floyd M. White, Private, 1st Cl. Gerald F. Heffling and Private James A. Pelling, Crew Chiefs, all of the 27th Pursuit Squadron.

Enlisted men from Selfridge Field traveling to the Cleveland Races in their own conveyances were Sergeant James D. Burrus, 1st Pursuit Group Hqrs., Crew Chief; Technical Sergeant Stanley K. Gibbins, Line Chief, Staff Sergeants Harry E. Reimenschnider, Doak Geren, and Sergeant William R. Wright, Crew Chiefs, all of the 17th Pursuit Squadron.

All personnel participating in this demonstration flight returned to Selfridge Field on the evening of September 2nd.

Touching on the flying demonstration staged by military flyers at the Air Races, Mr. C.B. Allen, Staff Correspondent of the N.Y. HERALD-TRIBUNE, stated:

"Plenty of noise and spectacular air pageantry was supplied by a group of eighteen Boeing fighters and twelve Curtiss Hell-Divers from the Marine Corps base at Quantico, Va., and a dozen Army Boeing P-26 pursuit planes from Selfridge Field, Mount Clemens, Mich., the former group commanded by Major Roy Geiger and the latter by Lieutenant Colonel Ralph Royce.

The Marine show was hailed as a brilliant triumph for this service, while the Selfridge group's performance later in the afternoon was acclaimed just as great if not a greater success. The faster and more modern low-wing mono-

plane fighters of the Army men proved capable of even more spectacular dives, zooms and serpentine twists than the sturdy biplane fighters of the Marines.

Particularly breath-taking, judging by the crowd's gasping reaction, was the 'Bursting Bomb' formation staged by the Army airmen in which three planes dive in formation from high altitude directly toward the stands, then pull up abruptly in a three-ship Immelman turn, the outside men pulling away from the leader in an aerial mushroom that gives the effect of an explosion. * * *

The Army's 'Three Men on a Flying Trapeze,' Major C.L. Chennault and Lieutenants J.H. Williamson and W.C. McDonald, from Maxwell Field, Ala., displayed their familiar aerial wares of team stunting, doing as a unit virtually all of the loops, spins, rolls and Immelmans attempted individually by other acrobatic stars."

---oOo---

RETIREMENT OF TWO AIR CORPS NON-COMS.

There was an unique formation at Kelly Field, Texas, on August 31st, when two enlisted men were retired on the same date, Technical Sergeant George W. Palmer, of the 39th Observation Squadron, and Staff Sergeant Harry Kamoski of the Air Corps Advanced Flying School Detachment.

Technical Sergeant Palmer entered the service July 21, 1906, and was assigned to Troop "M," 13th Cavalry, in which branch he served until July 26, 1909. He served with the Infantry from July 27, 1909, to July 26, 1912, and from August 7, 1912, to July 31, 1919. He was a second lieutenant of Infantry from July 9, 1918, to July 31, 1919. He reenlisted in the Quartermaster Corps September 13, 1919, and served with that branch until September 12, 1923, and again with the Infantry from September 13, 1923, to January 5, 1927. On the following day he reenlisted in the Air Corps and served with that branch until his retirement. Technical Sergeant Palmer has been a non-commissioned officer in three branches of the service, and has held the grade of Technical Sergeant since March 28, 1933.

Staff Sergeant Kamoski's service dates from July 27, 1903, when he enlisted in the Cavalry, in which branch he served until February 12, 1914. Reenlisting on February 21, 1914, he served in the Quartermaster Corps until February 3, 1923, holding the grade of Sergeant, 1st Class, QMC, during the World War. He served continuously in the Air Corps since March 6, 1923, and has been a noncommissioned officer since March 6, 1926.

---oOo---

With the completion of the boundary lights, Post Field, Fort Sill, Okla., is now prepared to welcome night flights. A rotating beacon, which can be seen fifty miles, operates from dark to dawn to mark the location, and the flood lights facilitate landings.

THE BOMBERS ARRIVE
By Marguerite Jacobs Heron
Materiel Division Correspondent

SUMMER routine at Wright Field was climaxed by the popping up on the calendar of August 22nd. In the usual summer this day causes no stir. It is neither holiday, feast, fast day nor the birthday of anyone so far as we editorially are aware. This summer the Army marked it for the

opening of competitive bids covering new Bombardment airplanes and the closing day upon which the subject airplanes entered in the competition could arrive at Wright Field.

Now airplane competitions of types other than Bombers for purposes of making a purchase come and go, causing no great ripple in the routine of government procedure, no panting inquiries from a press-inspired public. But Bombers seem to be different. Bombers can be named - without sanction of christening, of course - "Death Angels," "Flying Demons" and "Aerial Destroyers," and though when tested down to unadorned Army B-6's, or B-9's, or B-10's they are completely dethrilled, the hint of a new one under construction sets the same old palpitations astir.

"Mystery" Bomber was the name bestowed in this most recent instance, and circular proposals had not been long in circulation when rumors began to appear in the press of its construction on the West Coast in the plant of the Boeing Company. Hints as to its behemoth size, its amazing range, and capacity began to seep forth in the good old traditional manner. Finally, as construction progressed, the manufacturers, despairing of keeping details concerning the new plane confidential, requested a War Department release, in an effort to gain control and have facts rather than rumors appear in the press. This release was made.

In the meantime, however, a Bomber constructed by the Douglas Company for entry in the same competition had been flown to Wright Field by Carl Cover, Douglas representative, and was, generally speaking, parked for weeks on the flying line, and flown repeatedly by Mr. Cover for demonstration purposes, without, for some unexplainable reason, arousing public curiosity at all. The Materiel Division, in accordance with policies governing speculation and experimental airplanes, made no publicity releases on any of these entering airplanes, but it thoroughly enjoyed the presence of the big new all-metal ship in its midst, as well as the very beautiful flying demonstrations which in Mr. Cover's skillful hands it had the opportunity of witnessing from time to

time. Just how the Douglas plane escaped the "mystery" category, we don't know.

As the closing day of the competition approached, rumor concerned itself once more with a "mystery" Bomber, manufactured this time in the East by the Glenn L. Martin Company. As in the case of the Boeing manufacturers, the Martin Company also requested a War Department release to control rumor and substitute fact for guess work, and such a release was issued on August 12th. As the closing day was near, it seemed probable that the Martin, Douglas and Boeing planes would be the sole entries, though the contest had been open to all manufacturers.

In the meantime, Materiel Division officials had a busy time explaining to an interested world that the competition would not be decided on speed races of the Bombers entered; that there would be no competing flight tests which the public could be invited to witness; that there would be no public exhibition of the airplanes, which were being brought to the field solely for the very serious business of test and appraisal, with purchase for cold government cash in view.

As the time approached for the arrival of the Western and Eastern "mystery" planes, a greater sympathy for public curiosity was felt throughout the Field, where the interest not only of flying and engineering but of clerical personnel became evident. After all, in spite of the necessarily peripatetic habits of its military personnel - who once they have served at the Division almost always forever after "belong" - the Division in its aeronautic enthusiasms is a rather close-knit family of many years' standing. Literally hundreds on the field had seen the lumbering three-story Barling lift itself in flight, and would never forget the sight. That first flight had occurred on an August 22nd in 1923. The new four-motored Boeing promised to be the largest ship designed for the Army since that time. It was said to be powered with four engines producing 2800 h.p. The Barling had mounted six motors producing 2400 h.p., and though they knew any comparison between the two planes would be merely for the purpose of pointing out tremendous progress, the "promised bigness" held its own appeal.

On August 20th, about fifteen minutes before expected, 3:47 p.m., to be exact, there was an even purr high above the Field, and by the count of four whirling propellers and a silver gleam, all knew that the new Boeing had arrived to ac-

V-6857, A.C.

count for itself. Circling the Field deliberately several times, the great plane came lower and finally glided smoothly in to a landing. It had made the flight of 2100 miles from Seattle to Dayton in 9 hours and 5 minutes, which meant an average well over 200 miles per hour, and its pilot, Leslie Tower, climbed from the cockpit serene, unruffled, and with no sign of having spent the day at the controls.

In flight with the whole sky as background, it would have taken a much smaller plane flying near to have brought out the realization of the Boeing's size; even brought to rest on the ground, so clean and "flowing" are the lines that one still might be fooled as to its actual bigness. As with the Douglas, the "silvery" finish of the metal contributes to the smoothness of appearance.

Late in the afternoon of August 21st, the Eastern "mystery" was flown from the plant of the Glenn L. Martin Company by Pilot William Ebel. No speed could be estimated for the flight, since storms had been circled en route, greatly slowing up the time. In appearance the new Martin generally suggests a larger B-10 which, considering the fact that the latter plane is the Army's latest standard and one of the world's most successful Bombardment airplanes, is in no sense a derogatory statement. For the new plane, however, the Martin engineers claim many new and advanced features.

Despite press announcements that the Bombers would not be on special exhibition, and that only the usual tours of visitors through the Field would be made each day, hundreds of people poured in, and dozens of inquiring telephone calls were received. One call came from

a local brokerage house, whose New York office had inquired via their private wire as to when the "big plane" was to fly. There was no doubt as to a wide public interest.

Nor to our unofficial eye were the three planes undeserving of it. Mid-wing metal monoplanes, with retractable landing gears and motors streamlined into the wing, they represent the foremost in modern engineering and aerodynamic thought.

Inspection, test, and appraisal of these planes will take some time. In fact, the Bombardment Board, consisting of Air Corps officers who will study all the data collected through Air Corps inspection and test, as well as fly the planes before submitting their recommendations for purchase to the Chief of the Air Corps, is not scheduled to meet until late in September.

The Air Corps has no official knowledge to date of any performance figures. Specification requirements, however, demand a high speed of from 200 to 250 miles per hour at 10,000 feet; an operating speed from 170 to 220 miles per hour at the same altitude; an endurance at operating speed of from six to ten hours, and a service ceiling of from 20,000 to 25,000 feet. In view of the fact that each of the manufacturers expects his entry to surpass specification requirements, besides contributing special engineering features valuable for Bombardment tactics, the competition may well be expected to advance the present very high status of Air Corps Bombardment development. Such results, at any rate, are devoutly hoped for by the Government.

---000---

GENERAL ANDREWS GIVEN THREE AIR RECORDS

Brigadier-General Frank M. Andrews, Air Corps, commanding the GHQ Air Force, Langley Field, Va., received official credit for three new world seaplane records as the outcome of his flight on August 24th from his headquarters to Floyd Bennett Field, N.Y., to Bolling Field, D.C., and back to Langley Field. On this trip he covered the course in 3 hours, 45 minutes and 13 seconds.

The announcement by the National Aeronautic Association credits General Andrews with a new speed record for 1,000 kilometers, or 621 miles, with a pay load of 1,000 kilograms (2,200 lbs.) He automatically established records at the same time for the same speed and distance without load and with load of 500 kilograms. The General failed in an attempt to establish three additional records for 2,000 kilometers, but told officials of the National Aeronautic Association that conditions for the flight were not the best, and he feels he will be able to establish the

three 2,000-kilometer records and to better the new 1,000-kilometer marks by 10 to 15 miles per hour with more favorable conditions. He has not made definite plans for another attempt.

The three new records were established in a Martin B-12W Bombardment airplane with pontoon flotation gear in the place of the normal landing wheels. Two 1,100-lb. bombs were carried as the pay load, and the take-off was made with 2,700 lbs. of fuel.

The three former records which were eclipsed by General Andrews were established by Colonel Lindbergh in a Sikorsky Clipper ship last year. The speed then recorded was at 157.8 miles per hour. On this flight Colonel Lindbergh was assisted by Boris Sergievsky and Edwin Musick. The Sikorsky S-42 is now being used by Pan American Airways in the pioneering of trans-Pacific air transport service.

The flight by General Andrews was made at an altitude of 10,000 to 11,000 feet. V-6857, A.C.

USE OF MASTS IN AIRSHIP OPERATIONS IN THE FIELD

By the Langley Field Correspondent

Airship operating bases with their huge hangars and elaborate installations have given the casual observer the impression that nonrigid airship operations should always be conducted within range of these bases. It is quite certain that the airship base cannot be omitted from the scheme of operations in general. Under war conditions, however, it may be assumed that airship docking facilities will be used principally for the erection or overhaul of ships and repairs to the structures requiring overhead tackle, extension ladders, and other facilities not ordinarily available in the field.

The 19th Airship Squadron at Langley Field, Va., has been active in perfecting field equipment for securing airships of the TC-13 type to stub masts in the field. A table of organization is being prepared providing for two "mast sections" and a "base section." This three-section unit of 170 enlisted men, it is said, can dispatch its two mast sections into the field at strategic points and operate its airship for approximately 500 aircraft flying hours before returning to its base for engine changes and envelope inspections. The provisional table provides a flight crew of three pilots and six enlisted men for each section. In the initial flight from the operating base to the site of the first mast, the airship is manned by the base section flight crew. Thereafter the crews are rotated in such manner that there is always a fresh crew standing by for relief.

The 19th Airship Squadron designed and built a mast which was first tested last January at Miami, Florida. It has subsequently been erected at Fort Bragg, N.C., and at Virginia Beach, Va. While at Virginia Beach the Unit Mobilization Plan for one mast section of the Squadron was service tested. This afforded excellent training in mobilization,

movement and bivouacking in the field. It is interesting to note that one hour after the movement order was issued on the morning of August 6th, the equipment and personnel were loaded and under way. Upon arrival at destination, each unit of the section proceeded with their respective phases of developing the site and in two and one-half hours were ready to receive the airship.

The mast developed is a tubular shaft guyed by six cables secured to "dead men" buried at a depth of six feet. The upright column is in two sections which, when dismantled, may be carried in a transport or bombing airplane. Another recent development consists of the tail-drag used to apply a variable load to the tail of ship, permitting of the ship being moored statically light with the car free to rotate about the mast in shifting winds. As rotation about the mast precludes the use of the standard engine mechanics stand for engine maintenance, a platform was constructed for attachment to the engine outrigger. This article is very essential part of the section's field equipment.

During the period of the maneuver the ship was moored to the portable mast for a total of fifty-two hours, and no difficulty was experienced in handling it, although strong winds and bad weather prevailed on August 7th. On another occasion while moored, the TC-13 airship withstood the thrusts of squall winds preceding a thunderstorm. The peak of the gusts was indicated at 45 m.p.h. on the ship's airspeed meter. In one broadside the tail drag, carrying a load of 1400 pounds, was lifted 18 inches from the ground. Increasing the weight of the tail drag to 1800 pounds has, it is thought, corrected this condition. The storm referred to is believed to represent the normally severe summer weather expected to be encountered in this geographical location.

---000---

31ST BOMBARDMENT SQUADRON IN MANEUVERS AT MEDFORD, OREGON

Extensive maneuvers, with emphasis placed on Bombardment Aviation, were held at Medford, Oregon, during the period August 19th to 24th. Listed as a Squadron Tactical Exercise for the 31st Bombardment Squadron, the training objective was the successful conduct of long-range bombing operations at a distance from a given base.

Responsibility for the actual flying missions was charged to Major H.D. Smith, Air Corps, with Major D.M. Myers, Air Corps, in charge of the ground forces. Major Robert C. Murphy, Medical Corps, was Camp Surgeon. Camp was established at the Medford Airport, being inspected

toward the close of the maneuvers by Lieut.-Colonel C.L. Tinker, Commanding Officer, 7th Bombardment Group, Hamilton Field, Calif.

Whole-hearted cooperation was received from the Medford Chamber of Commerce, local citizens' committees, and the general public. The officers of the command were feted at a dinner at the Hotel Medford, while both commissioned and enlisted personnel were entertained at the wrestling matches held in the Medford Armory.

The incomparable scenic beauty of the terrain wherein Medford is situated, enhanced by such natural advantages as

as beautiful streams, jewel-like lakes, extensive wooded areas, and rugged, majestic mountain ranges, offering as they do all the numerous delights available in a huntsman's or fisherman's paradise, delighted the nimrods and enthusiastic hunters of the finny tribe among the soldiers during their leisure periods.

---oOo---

AERIAL GUNNERY, ALIBIS, AND CELEBRATION OF ORGANIZATION DAY

The 50th Observation Squadron, stationed at Luke Field, T.H., reports that the completion of the annual aerial gunnery season at Bellows Field left many in doubt as to the hour, the day, the month and the year of our Lord, but most of the expatriates detailed to the summer encampment to aid in the completion of aerial gunnery on ground targets and the training of ground machine gun crews had little doubt as to the base of their operations. While the tropical sun climbed from the depths of the vast Pacific and daubed the eastern horizon with a thousand tints and shades, the drone of the little "Wasp" could be heard far overhead, its pilot patiently awaiting the light of a new day to spot that elusive little "bullseye" and record once again in the famous book of alibis another page in the history of the Squadron. On the ground, pasters in hand, the range crews awaited the signal of the pilot that the mission had been completed before rejuvenating maybe a badly shot up target or one that was hardly molested. But alas, after three weeks, with everyone sunburned and seasoned as only field soldiers are, they returned to their semi-country estate on the Island of Ford, and now conform to the regular routine duty call.

Organization Day, as celebrated by the 50th Squadron at Bellows Field on August 3rd, was highly successful, stimulated by the usual tales of various experiences. Sergeant Stine Hydok won the tissue paper drinking cup with his tale of an outfit he once belonged to. Said Sergeant Hydok: "That outfit was so tough that every man slept at attention." A good second to this story was the yarn spun by Staff Sergeant A.A. Wildman, telling how he was instrumental in designing the Clipper Ship. Staff Sergeant Kolb sang several songs, ably accompanied by Corp. Jim Pendleton, who performed on the comb and tissue paper, an instrument he mastered while a lad.

Owing to the limited number of buildings at Bellows Field, no place has been found for those whose modest scores seem to call for an explanation. Captain W.C. Sams, Operations Officer of the 50th Squadron, found a solution to this problem by tacking an "alibi" box near the Operations Office, thus eliminating the verbal groans and substituting a more silent form of weeping. Pilots and observers were not required to sign these documents, thus removing any suspicion of personal grievances and at the same time acting as a safety valve for those whose grief found little solace in locating a sympathetic listener.

---oOo---

COMMENDATION FOR SERGEANT HURLEY D. JONES

The Tail-less Arrowplane, piloted by Mr. John H. Geisse, arrived on August 3rd at the U.S. Army Airdrome, Lordsburg, New Mexico, enroute to Washington, D.C. In attempting to take off, the plane hit a small ditch, washing out the landing gear. Air Corps personnel at the airdrome immediately rushed to the scene to render whatever aid was possible and, with the cooperation of the personnel at Lordsburg, Mr. Geisse was able to obtain the services of a welder for the repair of the plane, after which he continued on his journey.

The Chief of the Air Corps received the following letter from Mr. Geisse, who is Chief of the Aeronautics Development Section, Bureau of Air Commerce, Department of Commerce, which was forwarded to Sergeant Jones, through channels, and a copy filed with his record: "My dear Sir:

While enroute to Washington from Los Angeles last week, I had occasion to call upon the Army Air Corps at Lordsburg, New Mexico, for assistance

in the repair of a damaged landing gear on my plane. The treatment which I received there was most commendable, and I particularly wish to call your attention to the splendid cooperation shown by the officer in charge, Sgt. Hurley D. Jones. The Air Corps is to be congratulated upon having such a capable man in its service."

---oOo---

94TH PURSUIT SQUADRON CELEBRATES BIRTHDAY

The 94th Pursuit Squadron, Air Corps, stationed at Selfridge Field, Mt. Clemens, Mich., celebrated Organization Day by attending a baseball game at Navin Field, Detroit, between the New York "Yankees" and the Detroit "Tigers" on August 19th. Although the very popular "Tigers" were defeated by a score of 7-6, the game was very exciting and enjoyed by all those who were able to attend. The Squadron then returned to Mt. Clemens and had a dinner at the Medea Hotel.

The 94th, commanded by Major Edwin J. House, A.C., was organized Aug. 20, 1917. V-6857, A.C.

B I O G R A P H I E S

LIEUT.-COLONEL JOSEPH T. McNARNEY

Lieut.-Colonel Joseph T. McNarney, Air Corps, Assistant Chief of Staff, G-4, GHQ Air Force, Langley Field, Va., was born at Emporium, Pa., August 28, 1893. He graduated from the U.S. Military Academy, June 12, 1915, was commissioned a second lieutenant and assigned to the 21st Infantry, with which organization he served until July 30, 1916. He received his promotion to first lieutenant on July 1, 1916.

His application to undergo flying training being approved, he reported to the Signal Corps Aviation School at San Diego, Calif., on July 31, 1916. Completing his flying training and receiving the rating of Junior Military Aviator on April 15, 1917, he remained at this school as an instructor in Meteorology and Radio Telegraphy until May 16, 1917, when he was assigned to duty with the 1st Aero Squadron at Columbus, New Mexico.

In August, 1917, Col. McNarney was ordered to duty overseas, and during his 21 months' service with the A.E.F. in France, he held various responsible positions at the front. From September 1, 1917, to January 10, 1918, he was on duty with the 1st Aero Squadron at Etampes, Avord and Amanty, France, and Assistant Director of the 1st Corps Aeronautical School. He was then on duty with Headquarters Air Service, GHQ, to February 1, 1918; Director of the 2nd Corps Aeronautical School to April 8th; on duty with Headquarters, Zone of Advance, to May 7th; Flight Commander with the 1st Aero Squadron, Toul Sector, to July 1st; on duty on the staff of the 4th Corps Observation Group to July 16th; Commanding Officer, Observation Group, 1st Corps, during the Chateau Thierry Offensive, to August 1st; Chief of Air Service, 3rd Corps, during the Chateau Thierry Offensive, to August 8th; on the staff of the Chief of Air Service, 1st Army, to August 17th; commanding Observation Group, 4th Corps, during the St. Mihiel Offensive, Toul Sector, to September 24th; commanding Observation Group, 5th Corps, during the Meuse-Argonne Offensive, to October 9th; Corps Air Service Commander, 6th Corps, in Toul Sector, to February 18, 1919; commanding Army Observation Group, Second Army, to April 19th; and from that date until June 6, 1919, he was on duty at General Headquarters, Paris, assisting in writing a manual on Observation.

During the course of his flying activities in France, Col. McNarney piloted DH's, Spads, Nieuports and Salmsons.

Shortly following his return to the United States, he was assigned to command Godman Field, Fort Knox, Ky., and

he remained on this duty until October 18, 1919, when he was placed in command of the flying school at Gerstner Field, Lake Charles, La. On November 9, 1920, he was transferred to Langley Field, Va., where he was stationed for the next five years as instructor at the Field Officers' School, the designation of which was later changed to the Tactical School. During the school year 1920-21, he was a student as well as instructor, and he received his graduation certificate in June, 1921. In the fall of 1925, he was assigned as student at the Command and General Staff School at Fort Leavenworth, Kansas, from which he emerged in June of the following year as an honor graduate.

Following a tour of duty of three years as a member of the War Department General Staff in the Air Section, Military Intelligence Division, Col. McNarney was a student at the Army War College and, upon his graduation, was assigned August 7, 1930, as commandant of the Primary Flying School at March Field, Riverside, Calif. Upon the transfer of this school to Randolph Field, Texas, he remained at March Field on duty for the most part as Commanding Officer of the 7th Bombardment Group. At various times he also served as Executive Officer and as Commanding Officer of the 1st Bombardment Wing.

Col. McNarney's next assignment was that of Instructor at the Army War College in August, 1933, and he remained on this duty until March, 1935, when he took over his present duties with the GHQ Air Force.

During and subsequent to the World War, he held the temporary rank of Major from July 30, 1918, to Sept. 16, 1918, and that of Lieut.-Colonel from May 22, 1919, to February 21, 1920. He was transferred to the Air Service with the regular rank of Major on July 1, 1920.

---oOo---

MAJOR SHEPLER W. FITZ GERALD

Major Shepler W. FitzGerald, Air Corps, who is now serving a tour of duty as a member of the War Department General Staff, is one of the early Army flyers, affiliating himself with aviation in September, 1914, when, as a second lieutenant of the Coast Artillery Corps, he was detailed to the Aviation Section, Signal Corps, and assigned to the Signal Corps Aviation School at San Diego, Calif., for flying training.

Born at Burden, Kansas, in 1884, on November 11th, a date which has since become famous, Armistice Day has a double significance for Major Fitz Gerald. Following his graduation from George Washington University, Washington, D.C., as an LL. B., he was affiliated as an

attorney with the Cutler-Hammer Mfg.Co., of Milwaukee, Wis., during the years 1908-1909. Passing the examination for a commission in the Regular Army, he was appointed a second lieutenant, Coast Artillery Corps, December 20, 1911.

Upon the completion of his flying training at San Diego, he was, on June 2, 1915, rated a Junior Military Aviator. Three years later he was rated Military Aviator. He assisted in the organization of the 1st Aero Squadron at San Diego, and in July, 1915, was transferred to Fort Sill, Okla. In November of that year, he was transferred to the 2nd Aero Squadron and ordered to duty in the Philippines. After a brief period of duty in the Islands, he returned to the United States and, due to his experience in piloting hydro-aeroplanes, was detailed to the John Hays Hammond Laboratory on work connected with the experimental testing of pontoon equipment.

Shortly following America's entry into the War, Major Fitz Gerald was on duty for a brief period at the Signal Corps Aviation School at Mineola, L.I., New York. In July, 1917, he was ordered to Toronto, Canada, where he commanded a detachment of American flying students undergoing instruction at the Royal Flying School. In September, 1917, he was assigned to the command of the flying school at Mt. Clemens, Mich., but remained on this duty only until the following November, when he was ordered overseas.

During the course of his service with the A.E.F. in France, he was successively in command of the 2nd Corps Aeronautical School, Chatillone-Sur-Seine (the Advanced Observation School) and the Second Aviation Instruction School at Tours (the Air Service Observation Training Center in France). Later he was Air Service Commander of the First Army, where he had supervision over the observation as well as other Air Service missions. He received high commendation from the Chief of Air Service, A.E.F., for the exceptional performance of his duties as Commanding Officer of the Second Aviation Instruction Center.

Upon his return from overseas duty, Major Fitz Gerald, on May 26, 1919, was assigned to duty in the Supply Group, Office of the Director of Air Service, Washington, D.C. He also served as a member of the Joint Army and Navy Board on Aeronautics. In September of that year, he was assigned as Assistant to the Executive, Office of the Director of Air Service.

In July, 1920, he was transferred to Rockwell Field, San Diego, Calif., as Commanding Officer of the Aviation Supply and Repair Depot. Two years later, in October, 1922, he was assigned to duty at Kelly Field, Texas, where he served as Executive Officer and Direc-

tor of Attack Training. He remained at Kelly Field continuously until February, 1926, except for several months' temporary duty in 1924 as Commanding Officer of the Rockwell Depot. He then returned to Washington where, after completing the course at the Army Industrial College, he was, in July, 1926, placed on duty as Chief of the Procurement Section, Supply Division, and as Contracting Officer. In December, 1926, he was assigned to the Training and Operations Division, Office of the Chief of the Air Corps, and on July 15th of the following year was placed in command of the Air Corps Primary Flying School at Brooks Field, San Antonio, Texas.

Detailed as a student at the Air Corps Tactical School at Langley Field, Va., in the fall of 1930, Major Fitz Gerald graduated from this School in June of the following year, and was then assigned as a student at the Army War College. His graduation from the latter institution in June, 1932, was followed by his transfer to a familiar stamping ground, the Rockwell Air Depot, where he remained in command until November, 1934. He was then assigned to his present duty as a member of the War Department General Staff.

During and subsequent to the World War, Major Fitz Gerald held the temporary rank of Lieut.-Colonel from September 12, 1918, to March 29, 1920, and he was transferred to the Air Corps with the rank of Major on July 1, 1920.

One viewing the Mackay Trophy will note Major Fitz Gerald's name engraved thereon. He and the late Captain Townsend F. Dodd were awarded this Trophy in 1914 for the most meritorious Army flight in that year. With Captain Dodd piloting a Burgess Tractor plane and Major (then Lieutenant) Fitz Gerald as observer, a reconnaissance flight was made on December 23, 1914, from Los Angeles, Calif., via Santa Ana, Capistrano and Oceanside, to Delmar, Calif., and return to North Island, San Diego. The take-off from Los Angeles was made at 9:44 a.m., and the landing at North Island at 1:01 p.m.

---oOo---

VULNERABILITY OF CONVOYS TO AIR ATTACK

In connection with the concentration of some 37,000 troops in the big war games at Pine Camp, N.Y., during August, newspaper reports quote Major-General Lucius R. Holbrook, commander of the second corps, as pointing out, in summing up the lessons learned from the maneuvers, that while the peacetime concentration worked out smoothly, the great truck convoys that moved the troops to the "war zone" would have made excellent air targets, and as suggesting that it might be better for the army to adopt the "rendezvous method" of moving single trucks by different roads by day and night "that to move them in large vulnerable convoys."

AUTOMATIC AIR NAVIGATION ACCOMPLISHED

Flights on August 29th at Wright Field, Dayton, Ohio, by personnel of the Equipment Branch of the Materiel Division, resulted in the successful completion of automatic radio navigation.

A Martin Bomber, equipped with a Sperry Automatic Pilot and the standard radio compass developed by the Air Corps, has been flown with additional apparatus which combines the two above devices. It is only necessary to tune in a radio station at the destination of the flight, close a few valves, and the airplane will, without aid of the human pilot, fly to the destination selected.

The radio stations used in these tests were WLW at Cincinnati, and the Dayton stations WSMK and WHIO. When the Martin Bomber reached one radio station under automatic navigation, the other radio station was tuned in and the big Bomber slowly turned and headed for its new destination without any aid from the pilot.

The development, which is being carried out at Wright Field, under the co-operative guidance of the Equipment Branch and the Aircraft Radio Laboratory, will provide for greater safety during flight under adverse weather conditions, as well as insure accurate automatic navigation over long distances.

---oOo---

AIRCORPS MOTOR CONVOY RECORD CHALLENGED

Captain G.B. Devore, Infantry, D.O.L., stationed at the University of California, Berkeley, Calif., takes exception to the statement which appeared in the News Letter of August 15th in connection with the maneuvers of the 15th Observation Squadron, Scott Field, in co-operation with the 61st Coast Artillery (Anti-aircraft). In the article on the above maneuvers, the Scott Field Correspondent, pointing to the fact that the Squadron Motor Convoy on the return trip from Muskegon, Mich., to Scott Field, marched a distance of 473 miles in 16 hours and averaged 29½ miles an hour, expressed his belief that a record was set on this march.

Captain Devore, in a letter to the Scott Field Correspondent, stated:

"Your belief as to the establishment of a new record for a motor march by the army is in error despite the splendid record you did make.

In May of this year the undersigned commanded a provisional rifle company of the Second Division which made a motor march from Fort Sam Houston, Texas, to El Paso, Texas, and return.

Elapsed time for the march each way was 19 hours. Distance covered each way was 587 miles. Personnel - 115 officers and men. Incidentally at no

time did this convoy exceed 35 miles per hour. Halts were made at the end of each 75 mile run."

---oOo---

MAJOR MURPHY TRANSFERRED TO FT. STEVENS

Major Robert C. Murphy, Flight Surgeon, on duty with the Air Corps at Hamilton Field, San Rafael, Calif., will sever connections with the Marin Post in mid-September, when he will comply with War Department orders directing his transfer to Fort Stevens, Oregon, colorful Army post, listed as the Harbor Defenses of the Columbia.

Says the News Letter Correspondent: "It is with a sincere feeling of deep regret that the many friends of Major and Mrs. Murphy, of both civil and military society, contemplate the departure of this well-liked couple for their new assignment. He has had frequent occasion to address patriotic organizations, women's clubs, civic clubs and fraternal orders, displaying a comprehensive knowledge of a wide range of topics, but, as might be expected of one who has followed the flag in many foreign lands, his pet theme has usually been patriotism and love of country. For it is when you are far from home, in foreign climes, midst strange languages and customs that one appreciates the beauty of the old Red, White and Blue.

So, Major, it is Au Revoir and not Good-bye, for we have a feeling that somewhere, sometime, we shall again meet and renew old friendships."

---oOo---

CHANGES IN NONCOMMISSIONED PERSONNEL

The following changes in noncommissioned officers have recently occurred:

Master Sergeant Thomas E. Richards died at Mitchel Field, N.Y., on June 13, 1935.

Master Sergeant Alfred Bernhardt was placed on the retired list at Criss Field, Calif., August 31, 1935.

The following Technical Sergeants, Air Corps, have been retired at the stations indicated:

Carl O. Miller	Mitchel Field, N.Y.
John T. Dee	Mitchel Field, N.Y.
James L. Coulbourn	Bolling Field, D.C.
Chester McPheter	Hamilton " Calif.
Charles Schmitz	Mitchel Field, N.Y.
George W. Palmer	Kelly Field, Texas.

Promoted to Master Sergeant were Tech. Sergeants Ananias Nikulaine, Panama Canal Dept., and Fletcher H. Cox, Langley Field. Promoted to Tech. Sergeant were Staff Sergeants Edward J. McIntire, Leland Post, John Lukowski, Kelly Field; George Burton, Victor Vicsik, Panama Canal Dept.; Carl L. Johnson, Harley J. Fogleman, March Field; Lafe Teverbaugh, Langley Field; Mark Reynolds, Scott Field; Michael E. Connelly, Hawaiian Dept.; Basil Zaphiro, Mitchel Field.

JOBS IN COMMERCIAL AVIATION PICKING UP

An item just sent in by the Selfridge Field Correspondent, listing the names of nine Reserve officers and one Flying Cadet who were permitted to curtail their active duty tours in order to enable them to accept positions in civil life, would seem to lead to one or the other of two suppositions, perhaps both; i.e., that graduates of the Army Air Corps Training Center are very much in demand by air transport companies and that commercial aviation is well on the road to recovery and to much better things. The News Letter Correspondent adds that this list does not include those officers who have obtained employment upon the termination of their active duty tours.

Second Lieuts. Louis R. Black and Phares McFerren were relieved from active duty on May 2nd; Cecil M. Hefner, May 8th; Joe S. Irvine, May 24th; John B. Adams, May 28th; John O. Stewart, June 25th; Walter N. Pharr, June 30th; Edwin A. Warren, July 20th, Lloyd H. Bidwell, August 27th; and Flying Cadet Ansel S. Williams, July 28th.

Lieut. Black accepted employment with the Transcontinental Western Air Transport, Inc., Kansas City, Mo.; Lieut. McFerren with the Transcontinental Air Transport, Inc., Kansas City, Mo.; Lieuts. Hefner and Bidwell with the American Airlines, Inc., the former at Fort Worth, Texas, and the latter at St. Louis, Mo.; Lieut. Pharr with the same company at Chicago, Ill.; Lieut. Irvine with the Pennsylvania Airlines, Inc., Pittsburgh, Pa.; Lieuts. Adams and Stewart with the United Airlines, Inc., Chicago, Ill.; Lieut. Warren with the Transcontinental & Western Airways, Inc., Kansas City, Mo., and Flying Cadet Williams with the Law Department of the Southern Pacific Co., New York City.

---oOo---

RUNWAYS BEING BUILT AT LUKE FIELD

The men of the 72nd Bombardment Squadron recently completed the first of Luke Field's runways, on which they had been working for three weeks, only to leave for their annual encampment at Bellows Field before having a chance to use it. To the 23rd Squadron went the honor of "breaking it in." The next day, the 23rd began the construction of the second runway, under the supervision of Lieut. Crickette.

---oOo---

JOE PENNER SHOULD READ THIS

The Sixth Pursuit Squadron at Wheeler Field, T.H., can boast of one of the most unusual birdmen in the Air Corps in Crew Chief, Corporal C.C. Simpson.

Not content with keeping his P-12 in splendid condition, Corporal Simpson, with the aid of his son, operates a duck farm near Waialua. At the present time he has over one thousand ducks - enough to supply one to every pilot in the Air Corps. The revenue from the sale of ducks has been a material aid in the education of Private W.L. Simpson, Corporal Simpson's son, also in the 6th Pursuit Squadron, who is at present a student in the West Point Preparatory School at Schofield Barracks.

Corporal Simpson reports that not a single one of his ducks have ever made a water landing with the undercarriage down.

It is to be hoped that the day will not be far distant when Corporal Simpson will take orders from his son and like it.

---oOo---

CHIEF OF CHAPLAINS VISITS SELFRIDGE FIELD

Colonel Alva J. Brasted, Chief of Chaplains, who has just completed a three months' tour of inspection of all Army posts, stations, camps, and CCC camps in the northwest, southwest and on the Pacific coast, arrived at Selfridge Field, Mich., on the morning of August 22nd, and was met at the main gate by Lieut.-Colonel Ralph Royce, the post commander, who escorted him to the 17th Squadron hangar, where Colonel Brasted addressed the entire command on the increasing need for character building as a foundation of military morale in the Army.

Following the address, a luncheon was given in his honor at the Officers' Club. After the luncheon, Colonel Brasted held conferences with a number of National Guard and CCC chaplains from all over the State who had been invited to meet the Chief Chaplain as guests of Chaplain Peter J. Quinn, of Selfridge Field. After the conferences, the Colonel departed for Detroit, Mich.

---oOo---

CADETS EXAMINED FOR RESERVE COMMISSIONS

A Board of Officers, headed by Lieut.-Colonel Clarence L. Tinker, Air Corps; and including Major Fabian L. Pratt, Medical Corps; Captain James W. Spry and 1st Lieut. Marvin L. Harding, Air Corps, was appointed August 23rd at Hamilton Field, Calif., to conduct the examinations of Flying Cadets, Air Corps, for appointment as second lieutenants in the Air Reserve.

The fortunate cadets so honored are Norman L. Callish, Claremont, Calif.; Radcliffe C. Clausen, Los Angeles, Calif.; Roderick O. Cote, Manchester, N.H.; Charles E. Fisher, Asheville, B.C.; Fred C. Johnson, Salt Lake City, Utah; Arthur M. Keppler, Houston, Texas; Herbert E. Knieriem, Modesto, Calif., and Herbert R. Volin, Pittsfield, Mass.

ALBROOK FIELD PERSONNEL ENGAGE IN AERIAL GUNNERY PRACTICE

The target practice season is in full swing for all the troops stationed at Albrook Field, Panama Canal Zone - the 16th Pursuit Group and the 44th Observation Squadron.

Daily, at least one squadron is firing on ground targets at the Wing Gunnery Range at Rio Hato, Republic of Panama; two squadrons are firing at tow targets while another squadron is using the bombing range and the fifth organization is conducting pistol practice.

The ground target range at Rio Hato is approximately 60 miles from Albrook Field. A range detachment of two officers and twenty-two enlisted men remain at the range during the entire gunnery season, but airplanes are maintained at Albrook Field. In order to take advantage of the relatively smooth air in the early morning, all planes which are to fire on the ground targets leave Albrook Field at 6:00 o'clock in the morning, to the great discomfort and disgust of the residents of nearbyposts and to a good many residents of the City of Panama as well. Normally, firing is

completed by noon, and the airplanes are returned to the station for necessary maintenance work. The system has the disadvantage of losing the smooth period in the late afternoons for firing. However, it has been found that airplanes maintained in the field during the rainy season deteriorate much more rapidly than they do in the United States, and for that reason it was decided best to give the equipment the benefit of the protection of the hangars at night, even if the gunnery work had to be prolonged into a supplemental training season.

The two tow target ranges are along the eastern shore of Panama Bay, only a few miles from the field. The bombing range is one corner of the field and the pistol range is also conveniently located.

It is estimated that all record aerial gunnery will be completed by the 16th Pursuit Group and by the 44th Observation Squadron by about the 15th of October. The pistol practice will be completed by September 30th.

---oOo---

POPULAR COMMANDER LEAVES ALBROOK FIELD

Lieut.-Colonel Robert L. Walsh, Air Corps, was relieved on August 14th of command of the 16th Pursuit Group and Albrook Field, and of his temporary rank, and sailed on the U.S.A.T. GRANT for New York. After a brief leave of absence, Col. Walsh will be on duty in the Office of the Chief of the Air Corps as Chief of the Reserve Division.

The departure of Col. Walsh and his family was sincerely regretted by the entire garrison, as he had proven a most popular commander.

A few days prior to his departure, Col. Walsh was tendered a ground review of the troops of the entire garrison with the 4th Coast Artillery band from Fort Amador present for this parting trib-

ute. Lieut.-Colonel Walsh was highly pleased with the smart appearance, as well as with the precision with which the ground movements were executed.

As the U.S. Army Transport GRANT was moving through the Gatun Lake, the 16th Pursuit Group passed in an aerial review for its former commander. The review was followed by a "rat race" which was thoroughly enjoyed by all of the passengers on board the Transport.

Lieut.-Colonel Charles T. Phillips, Air Corps, Operations and Executive Officer of the 19th Composite Wing, assumed command of Albrook Field on the departure of Lieut.-Colonel Walsh.

---oOo---

ONE HOSE FOR ALL PURPOSES

The ideal hose for aircraft engine installation is one that performs satisfactorily in the fuel lines, the oil line, or in the cooling system. Such a hose has become possible as a result of the progress made with synthetic substitutes for rubber. The material is to be procured and distributed to Air Corps activities at an early date, and will be suitably identified with one red and one white stripe, to announce properly its general usefulness.

---oOo---

Air Corps officers at the San Antonio Air Depot promoted on August 1st were Major (temp.) Morris Berman to Major; 1st Lieuts. Joseph H. Hicks and David J. Ellinger to Captain.

PROMOTION OF SELFRIDGE FIELD OFFICERS

Officers stationed at Selfridge Field, Mt. Clemens, Mich., who were promoted, with rank as of August 1, 1935, are listed below, as follows:

Quartermaster Corps - to Major: Capt. Edward J. Maloy.

Air Corps - To Captain: 1st Lieuts. Harlan T. McCormick, Alfred A. Kessler, Jr., Leo H. Dawson, Robert C. Oliver, Earle E. Partridge, Norme D. Frost, Lee Q. Wasser.

To 1st Lieutenant: 2nd Lieuts. Hanlon H. Van Auken, Clarence F. Hegy, Morley F. Slaght, Jarred V. Crabb, Minthorne W. Reed, Norman R. Burnett, Paul W. Blanchard, Jr., William J. Bell, David W. Hutchison, Charles H. Anderson, and Frank G. Jamison.

ADDITIONAL OFFICERS FOR THE AIR CORPS

Supplementing the 42 candidates who were appointed second lieutenants in the Air Corps, Regular Army, with rank from June 30, 1935, as a result of the competitive examination held on April 2-8, 1935, ten additional appointments from among those who took this examination were recently made by the War Department, Special Orders announcing their rank as of August 1, 1935, and their assignment to Air Corps stations, as follows:

To Maxwell Field, Montgomery, Ala.:

Corporal Daniel I. Moler, Middletown Air Depot, Middletown, Pa.

Private Clayton B. Claassen, Barksdale Field, Shreveport, La.

To Selfridge Field, Mt. Clemens, Mich.:

Private Eugene Brecht, Jr., March Field, Riverside, Calif.

Private Henry B. Fisher, Crissy Field, Presidio of San Francisco, Calif.

Private John O. Neal, Langley Field, Hampton, Va.

Private Harold L. Kreider, Langley Field, Hampton, Va.

Private William T. Hudnell, Jr., Langley Field, Hampton, Va.

Private Lawrence O. Brown, Patterson Field, Fairfield, Ohio.

Private Watson M. Frutchey, Boston Airport, Boston, Mass.

To Report to the Commanding General, Hawaiian Department, for assignment to duty:

Staff Sergeant Opal E. Henderson, Hawaiian Department.

---oOo---

FIELD EXERCISES BY 34TH ATTACK SQUADRON

Seventeen officers and 57 enlisted personnel, under the command of Major W.R. Peck, Air Corps, spent the week of August 21st to 28th at Big Bear Lake, Calif., conducting field maneuvers.

The landing field is at an altitude of 7,000 feet and, in addition to being a narrow two-way field, the pilots found it to be something quite different from the smooth landing mat at March Field. Both day and night flights were scheduled, and much valuable experience was received in operating under full military load at high altitudes.

Machine gun attacks on ground targets and live bombing missions were conducted daily at Muroc Lake, Calif. Some 6,000 rounds of ammunition and 125 fifty-pound bombs were expended. In addition to the tactical missions, individual night navigation flights to Hamilton Field, Calif., were performed.

---oOo---

The 18th Composite Wing conducted an "Aloha" Flight in honor of Postmaster General James A. Farley, who arrived in Honolulu on the MAILOLO on August 8th.

GOOD LANDING; FAST ENGINE CHANGE

Lieut. Dale E. Altman, Air Reserve, of Luke Field, T.H., recently had a forced landing with a B-5A. A piston failed, breaking off the connecting rod and leaving Lieut. Altman over Fort Shafter at 2,000 feet with only one engine running. The pilot skilfully maneuvered the plane into John Rodgers Airport with no further damage to it. Corporal Allen, Privates McAllister and Taylor, under the supervision of the Flight Chief, Technical Sergeant D. P. Herb, got on the job in the afternoon, and the next morning the engine was installed and Lieut. Kennedy, Engineering Officer of the 23rd Bombardment Squadron, flew the plane back to Luke Field.

---oOo---

SEARCHLIGHT PRACTICE AT MARCH FIELD

With its brand new motor equipment gleaming in the California sunshine, Battery "A" of the 63rd Coast Artillery from Fort MacArthur, Los Angeles Harbor, moved into March Field on the afternoon of August 23rd for two months of searchlight practice and battery maneuvers. The battery, comprising 126 enlisted men and commanded by 1st Lieut. Arthur B. Nicholson, is located at its former camp ground in the old CCC camp.

"Our program is far more advanced for this year than it has been at any time in the past," asserted Lieut. Nicholson upon his arrival. "As we have both old and experimental equipment, we have prepared for a busy and instructive two months at March Field."

We have brought five complete units with us, consisting of a searchlight, sound locator and comparator. In addition, we have four other sound locators we shall use in special experiments to determine altitude more correctly. The estimate method used previously was not accurate enough."

As March Field is equipped with Pursuit planes, and the principal mission of the Coast Artillery Corps is to prevent night bombing, it will be necessary to bring Bombardment planes to this station. Nine speedy Martin Bombers, the same ones that made the historic Alaskan Flight, will be flown to March Field from Rockwell Field at San Diego.

Planes used in this practice are colored black for camouflage purposes. Due to their high speed, the searchlight men will have to be on the alert and be able to move quickly.

The battery and its men are no strangers to March Field, having maneuvered there before in 1931, 1934 and early in 1935.

---oOo---

FIELD TESTS BY 12TH OBSERVATION GROUP

Field tests of two types were recently carried out by the 12th Observation Group, Brooks Field, Texas, for the purpose of ascertaining the efficiency of equipment and personnel operating under conditions of war. Primarily, all missions were those which would be assigned Corps and Army Aviation during actual engagement.

Beginning August 5th, the 12th Observation Squadron, Air Corps, (C & A), with detachments from the 12th Observation Group Headquarters, Station Complement and the 62nd Service Squadron, was moved into the field, establishing a base at Schreiner Field, Kerrville, Texas, and maintaining Brooks Field as a base of supply. Communication with Brooks Field was by means of Signal Corps field radio equipment, all messages being relayed in code. Communication from plane to ground was also in code.

During the period between August 5th and 8th, missions of oblique and vertical photography, visual reconnaissance and liaison were carried out, and the Squadron was then recalled.

On August 12th, the 22nd Observation Squadron, Air Corps (C & A), with detachments from the 12th Observation Group Headquarters, Station Complement, and the 62nd Service Squadron, were moved to Schreiner Field for a similar test over the same period of time.

Work of an entirely different kind was called for when the 12th Squadron was assigned to duty with the 90th Division of Organized Reserves on their maneuvers at Camp Bullis, Texas. Both night and day reconnaissance, spotting by flares, artillery adjustment, liaison and contact by radio, and harassment of ground forces were called for. This work was done on an attack and defense problem, covering a period of two days, August 15th and 16th.

The results of both tests were highly satisfactory with regard to efficiency of personnel and equipment, and information was derived for future use in problems of a similar type. Particularly useful was the knowledge gained of the operation of a Squadron with detachments under the new organization.

---oOo---

EFFECTS PRODUCED BY REDUCTION OF OXYGEN

A press release recently issued by the Navy Department records the fact that during an altitude flight by Fighting Squadron Six, of the USS SARATOGA, one of the oxygen regulators began to economize a bit and the pilot became non compos mentis in such short order that he was unable to leave the formation voluntarily before becoming not only a hazard but a menace to the rest.

As leader of the second section he calmly crawled up and tried to sit in the skipper's lap, then lost distance quite noticeably and finally ended up by flying around in a wide left circle, gradually losing altitude. His wing men saw his shoulders heave as he bravely pulled at the nipple to coax more oxygen into his starving lungs. After descending to 18,000 feet, he regained control of his senses and responded more or less intelligently to the signals of his left wing man, who finally coaxed him back into formation.

After landing, he could not remember clearly what happened, but about a half hour later, while eating lunch, his memory started coming back. He then reported the following symptoms, which may be of interest and value:

1. Slight twitching of the fingers.
2. Twitching of muscles in the wrists.
3. Difficulty in controlling the hands.
4. Eyesight apparently O.K. but range of vision very short.
5. Feeling of annoyance when squadron commander made a turn.
6. No apparent discomfort or loss of breath.
7. No knowledge that anything was wrong.
8. No sense of hearing (had radio but did not respond to repeated calls).

The press release states in conclusion: "Evidently the time to leave the formation is when your fingers begin to twitch, for at that time you still have enough sense to get clear."

---oOo---

GERMAN GLIDERS TRAVEL LONG DISTANCES

From a report which recently appeared in a German aeronautical publication on the annual soaring meet on the Wasserkuppe, in Germany, it is noted that during the first eight days of the meet a total of 323 flights was listed. The number of distance flights was remarkable, in that 140 flights were made over a distance exceeding 35 miles; 113 over 60 miles; 41 over 120 miles, 16 over 180 miles, 9 over 240 miles and 4 over 300 miles. The total distance flown was approximately 22,000 miles, more than 50 soaring planes taking part in the contests. The four gliders which covered a distance exceeding 300 miles flew in formation from the Wasserkuppe to Brunn in Czechoslovakia, 313 miles away.

---oOo---

Captain James M. Gillespie, Air Corps, of the Materiel Division, Wright Field, Ohio, recently spent a week at Kelly Field, Texas, giving lectures on power plants and accessories to the students of the Advanced Flying School and to the permanent officers of the post.

V-6857, A.C.



Up to just recently, there was a welcome lull in Caterpillar Club activities, which led to the hope that the year 1935 would set a new low in the number of emergency parachute jumps made. Of late, however, seemingly to make up for the slump in Caterpillar Club initiations, business "picked up," and there were two instances where emergency jumps occurred by the wholesale, one near San Diego, Calif., on September 5th, when three men "bailed out" on orders from the pilot, Lieut.-Colonel Tinker, from a Bombardment airplane, when he found that his landing gear had gone "hay-wire," and the other instance when, during a night flight, four men were initiated at midnight, due to the fact that the fuel supply had become exhausted. The telegraphic report on this accident stated that the weather conditions were zero zero, so that it may be assumed that the pilot, faced with a situation where there was a very low ceiling and hardly any visibility remained in the air as long as he could in the hope that weather conditions would improve sufficiently to enable him to make a landing.

The emergency parachute jumps made this year, up to and including September 8th, number 39 as against 60 made during the same period in 1934.

Touching on the triple initiation into the Caterpillar Club at San Diego, the News Letter Correspondent from March Field states:

"Caterpillars of the United States Army have had three more names added to the rolls of those who have pulled the rip cord of their parachutes to save their lives. The latest entrants into the mythical aeronautical fraternity are Major Samuel E. Brown, Flight Surgeon of the First Wing of the GHQ Air Force, March Field; Sergeant John Bailey of Seventh Bombardment Group Headquarters, Hamilton Field, and Private Donald Wright of the same detachment. The three jumps occurred at 5:00 p.m. September 5th.

Lieut.-Colonel Clarence L. Tinker, Commanding Officer of the Seventh Group, was returning with 61 other airplanes of the First Wing from a mock air attack on the California Exposition Grounds. As he started to come down for a landing, he noticed that his landing gear could not be lowered.

When it became apparent that ground repairs were necessary and that further attempts to lower the landing wheels were useless, he ordered his three passengers to jump. First to trust his life to the silken apparatus was

Private Wright, the radio operator. Next to jump was Sergeant Bailey, followed by Major Brown.

Colonel Tinker contacted the ground by radio, and was advised to go to Rockwell Field where expert mechanics were available. He glided in on the belly of his plane, which suffered only very slight damages. Chief among these was the tearing off of the bomb bay doors.

Private Wright was the only one of the four who was injured. He suffered a slight head bump, but was returned to duty after the accident. Due to lack of passenger space in the Seventh Group planes, Colonel Tinker was the only one of the four who was able to find a place in a plane for the night maneuvers which took place about three hours after the near fatal mishap.

Major Brown, when interviewed after his return to terra firma, was very enthusiastic about his first parachute jump. He stated that he had often thought about making a jump during his 18 years of continuous service as a flight surgeon. He had often wondered whether he would have 'nerve' enough to make the jump. The Major had his head up when the chute opened and landed sitting down.

The courage displayed by Colonel Tinker on September 5th was thoroughly in keeping with this officer's splendid record. As a Major he was assistant military attache for air to the American Embassy in London, England, in 1926. To demonstrate the performance of one of the Embassy planes, he was piloting it over a marked course with Lieut.-Commander Robert A. Burg, of the U.S. Navy, as a passenger. When his ship caught fire, he managed to make a landing and free himself from the blazing plane. Though the plane was by now a blazing inferno, his first thought was to extricate his friend. Failing to do this, he tried from the other side and was successful in freeing the dying Commander. Lieut.-Colonel Kenyon Joyce, the Military Attache, recommended Major Tinker for the Distinguished Flying Cross.

Well known to Californians, Colonel Tinker has been Commandant of the Riverside High School R.O.T.C.; Commander of the 17th Pursuit Group at March Field, and before that the Commander of the 20th Pursuit Group at Mather Field, Sacramento. His first four years in the United States service were spent as a third and second lieutenant in the Philippine Constabulary on the Island of Panay.

The quartet who went through a midnight initiation into the Caterpillar Club and were none the worse for their experience were occupants of a B-6A Bombing plane from Langley Field, Va. The pilot was Flying Cadet Willis S. Marvin, 96th Bombardment Squadron, and the passengers, Corp. Frank B. Connor, of the 96th; Sergeant Charles A. Johns, Station Complement, Langley Field; and Private, 1st Class, Daniel C. Murdock, 2nd Bombardment Group Headquarters. The airplane crashed in a corn field and was burned completely.

Hilmer Anderson, civilian, taking his test for a private license before Department of Commerce Inspectors, was forced to "bail out" from his Hisso-powered "American Eagle" when the controls became inoperative after he brought the plane out of a left spin. "It was a great feeling of satisfaction to be sitting on my 24-ft. Russell Lobe Chute," he stated.

Private, 1st Class, George W. White, 97th Observation Squadron, Mitchel Field, N.Y., jumped on the night of August 20th from an O-1G Observation plane, piloted by 2nd Lieut. Robert M. Scherer, Air Reserve, who was on active duty at Mitchel Field, and was flying on a night mission in connection with Anti-Aircraft demonstration during the First Army maneuvers. Private White jumped and landed without injury but, for reasons unknown, Lieut. Scherer did not jump, and he lost his life in the crash of his plane near Watertown, N.Y.

Flying Cadet Lucion N. Powell, stationed with the 1st Pursuit Group, Selfridge Field, Mich., piloting a P-26A airplane, was forced to make a parachute jump on the evening of August 18th, about four miles southeast of Chelsea, Mich., when his motor failed. The terrain in the vicinity of Chelsea, although not rugged, is exceedingly broken, and in the limited time at his disposal, Cadet Powell apparently was unable to locate a suitable landing place for his P-26A.

Lieut. William J. Bell, Air Corps, who was

also initiated at night, stated in his report that when he realized he had to jump he had no misgivings. "It was simply a job I had to do," he stated. "As soon as I realized that I was clear of the ship I pulled the rip cord and received a terrific jerk as the chute opened. As soon as I realized that the chute had opened all right, I adjusted my seat and looked around the countryside. I still had the rip cord in my hand and rolled it up and put it in my jacket pocket. I had no sensation of coming down at all while I was at a higher altitude. It was very dark and I could not see the ground coming toward me until I was about 200 feet from the ground and then I seemed to be falling very rapidly. I had my back facing down wind when I landed, made a complete somersault and stood up, feeling no injuries."

Caterpillars, Silk Sailors, Sky-Hookers, or what have you, who were initiated into the mythical but nevertheless famous Caterpillar Club thus far in this calendar year, are enumerated below, as follows:

No.	Date	Name	Rank	Place of Jump
694	January	11 Charles W. Wellman	Corporal, Air Corps	Brooksville, Indiana
695	January	19 F. R. Cook	Flying Cadet, Air Corps	Cortoro, Arizona
696	March	5 Clarence D. Fields	Staff Sergeant, Air Corps	Pescado River, Panama
697	March	6 John H. Price	Sergeant, Air Corps	Near Centerville, Texas
698	March	16 A. R. Radford	Lt.-Comdr. U.S. Navy	Near Woodville, Texas
699	April	4 John F. Guilmartin	Flying Cadet, Air Corps	Colton, Calif.
700	April	5 Daniel S. Campbell	2nd Lieut. Air Corps	Pearl City, Hawaii
701	April	8 A. B. Thompson	Lieut. (JG) U.S. Navy	Ramona, Calif.
702	April	8 J. Hulme	Lieut. (JG) U.S. Navy	Ramona, Calif.
703	April	8 H. G. Holden	Seaman, 1st Cl. U.S. Navy	Ramona, Calif.
704	April	15 William C. McDonald	Sergeant, Air Corps	Ashland, Ky.
705	April	17 John W. Green	Civilian	Boston, Mass.
706	April	17 John B. Ackerman	2nd Lieut. Air Corps	Kelly Field, Texas
707	May	6 Lee Gehlbach	Civilian Test Pilot	Ravenna, Ohio.
708	May	11 Frank P. Hunter, Jr.	1st Lieut. Air Corps	Brujas Point, Panama
707*	May	17 Lee Gehlbach	Civilian Test Pilot	Dahlgren, Va.
709	May	27 William A. Matheny	1st Lieut. Air Corps	Talassce, Alabama
690*	May	30 George S. Buchanan	Flying Cadet, Air Corps	Montpelier, Indiana
710	June	13 Hilmer Anderson	Civilian	Felts Field, Spokane, Wash.
711	June	21 Hanlon H. Van Auken	Captain, Air Corps	Chesterfield, Mich.
712	June	22 John L. Giles	Tech. Sergeant, Air Corps	Banning, Calif.
713	June	22 Richard I. Dugan	Captain, Air Corps	Banning, Calif.
714	June	22 Francis H. McDuff	Flying Cadet, Air Corps	Banning, Calif.
715	June	27 Armin F. Herold	Major, Air Corps	Near Taylortown, La.
716	July	3 Frank B. Schaeede	Lieut. (JG) U.S. Navy	Peridido Bay, Fla.
717	July	6 Douglas M. Cairns	2nd Lieut. Air Corps	Kaena Point, Oahu, T.H.
718	July	11 William J. Bell	1st Lieut. Air Corps	Guelph, Ontario, Canada
719	July	16 George E. Leach	Major General	Near Seligman, Arizona
720	July	23 Forrest G. Allen	1st Lieut. Air Corps	Chanute Field, Ill.
721	August	10 Fulton G. Bulloch	Staff Sgt., Air Corps	Pontiac, Ill.
722	August	18 Lucion N. Powell	Flying Cadet, Air Corps	Near Chelsea, Mich.
723	August	20 George W. White	Private, Air Corps	Watertown, New York
724	September	5 Donald Wright	Private, Air Corps	San Diego, Calif.
725	September	5 John Bailey	Sergeant, Air Corps	San Diego, Calif.
726	September	5 Samuel E. Brown	Major, Medical Corps	San Diego, Calif.
727	September	8 Frank B. Connor	Corporal, Air Corps	Enfield, Va.
728	September	8 Daniel C. Murdock	Private, Air Corps	Enfield, Va.
729	September	8 Charles A. Jones	Sergeant, Air Corps	Enfield, Va.
730	September	8 Willis S. Marvin	Flying Cadet, Air Corps	Enfield, Va.

* Jumped twice.

NOTE: Total of 730 lives saved, 36 repeater jumps; total jumps 766.

EDUCATING AMERICA TO NEEDS OF AVIATION

A nation-wide educational program to bring the public up-to-date with the needs and advancements of American aviation was recently announced by President William G. McAdoo of the National Aeronautic Association, for the period September 23-November 1, 1935. Aviation organizations throughout the country are cooperating with the N.A.A. committees in seven hundred of the larger cities to develop plans for the observance of "Air Progress."

"America must lead in the air," asserts Senator McAdoo. "The present unrest in Europe and the race for greater armaments make it imperative that the United States develop speedily a more comprehensive program for air defense."

In the commercial air transport field we face the strong competition of continental countries in our South American and Far Eastern markets. At home, we have lagged far behind other countries in educating our people to the advantages of air mail, express and passenger service. Last year, less than one-half of one per cent of our citizens traveled by air, as compared to double this number who traveled on the air lines of France and Italy.

The 'Air Progress' program of the N.A.A. will, we hope, create a better understanding and a wider acceptance of aviation in all its branches," said Senator McAdoo, "and I invite the citizens of the United States to join with us in this important work."

Plans for the observance of "Air Progress" throughout America include airport demonstrations and air tours, public meetings, national and local radio broadcasts, retail store window displays, and various other features. The Department of Commerce and other governmental agencies are cooperating in arranging the national program.

---oOo---

FLYING RULES AT THE NEWARK AIRPORT

There has just been received a copy of the flying rules of what may well be termed the world's busiest airport - Newark, N.J. These rules went into effect on August 1, 1935, and are as follows:

"During the periods of unfavorable weather all air traffic will be controlled by radio.

Between the hours of sunrise and sunset when the ceiling is 800 feet or less and the visibility is $1\frac{1}{2}$ miles or less no airplane will take off from Newark Airport unless the airplane is equipped with at least a radio receiver in good working order and is in contact with the control tower.

Between the hours of sunset and sunrise when the ceiling is 1,000 feet or

less and the visibility 2 miles or less no airplane will take off from Newark Airport unless the airplane is equipped with at least a radio receiver in good working order and is in contact with the control tower.

No purely local flights (take off and landing practice or for any other purpose or purposes), will be engaged in at any time when the ceiling is 1,000 feet or less and the visibility 2 miles or less without specific authority in each instance by the control tower.

The hours of sunrise and sunset will be those hours given as such by the U.S. Weather Bureau.

Between the hours of sunrise and sunset when the ceiling is 800 feet or less and the visibility $1\frac{1}{2}$ miles or less the revolving beacon will be turned on.

Between the hours of sunset and sunrise when the ceiling is 1,000 feet or less and the visibility 2 miles or less the ceiling projector will be turned on.

---oOo---

DETAILS ON CRASH OF WILEY POST'S PLANE

In connection with the distressing accident on August 15th near Point Barrow, Alaska, which resulted in the untimely death of two beloved citizens of this country who have played a considerable part in the advancement of aviation - Will Rogers principally by talking about it and Wiley Post by saying little but accomplishing much through his outstanding flying achievements - the Director of Air Commerce, Mr. Eugene Vidal, recently submitted a memorandum to the Secretary of Commerce, Mr. Roper, giving various details concerning the airplane piloted by Mr. Post, the weather conditions prevailing during the flight to Alaska and the probable causes of the accident.

Mr. Vidal goes on to say: "To date certain information regarding the accident in which Wiley Post and Will Rogers lost their lives has been secured. The details preceding the crash were obtained, directly or indirectly, from an Eskimo who saw the plane fall, Sergeant Morgan of the United States Army, located at Point Barrow, a radio report from Inspector Hall of the Bureau of Air Commerce, located in Alaska. Also, I visited personally Mr. Crosson who flew to Point Barrow from Fairbanks in order to return the bodies to this country, Inspector Reed of the Department of Commerce, who licenses the airplane at Glendale, Calif., and others who had contact with Post and Rogers either at Los Angeles or en route. As you know, I traveled to Los Angeles in order to discuss with Mr. Crosson the probable causes and any other details which might have aided us in determining such causes of this crash.

Inspector Reed, one of our representatives in Los Angeles, informed me that he had inspected at Glendale almost daily

the alterations of the original Orion 9E airplane which Post had purchased in February, 1935. Inspector Reed, as a result of his regular and frequent inspections was satisfied with every detail from a construction standpoint. He told me that as to workmanship, it was a "splendid job." Mr. Reed did not fly the airplane, but watched Post's test flights and discussed with him its flying characteristics, which, by the way, were pleasing to Post. The Department could not issue an "NC" license for the plane because of the fact that a wing from another type of plane, a Sirius, had been substituted for the regular Orion wing and a larger motor and gas tanks had been installed. The plane was granted an "R", or restricted license. Mr. Post at various times expressed satisfaction over the plane's flying characteristics, particularly its stability, balance, and ease of maneuverability.

Mr. Post substituted for his wheel landing gear a pair of pontoons at Seattle and after being joined by Will Rogers, proceeded to Alaska from that point. At Fairbanks, Alaska, Post informed Crosson of Pan American Airways that the airplane had become nose-heavy on take-offs and landings following the installation of floats, and that on take-offs, he had instructed Rogers to sit as far to the rear as possible, and also to keep the equipment and the luggage well aft.

At Fairbanks, both Post and Rogers discussed with Crosson and others their proposed flights, and it was apparent that they had no actual schedule, no set plans, and no particular reason for departures and arrivals at any place on any certain dates. Post remarked that in their flying about Alaska, under no circumstances would he fly with Rogers in or above any cloud or fog bank. His plan was to travel as safely as possible by so-called "contact flying," turning back and landing in lake or river at any time when the weather made it dangerous to proceed. It was because of this attitude or policy that their reported indifference to weather reports could not be considered careless.

Pan American Airways base personnel at Fairbanks checked the plane and the motor and declared 'everything in good order,' with the exception that a generator failure eliminated self-starting the motor, thus making it necessary to start the motor by hand. The plane had no radio equipment and Post was navigating by compass and map.

Prior to their departure from Fairbanks a weather report from Point Barrow was requested. This report hadn't been received when they were preparing to depart. Post decided that they would start out and if the weather

proved unfavorable, would land on some lake, of which there were many, or river, and wait until conditions had improved. The weather report arrived at Fairbanks at 1:30 p.m., and read 'zero-zero.' It was reported later that weather conditions improved and at the time of the arrival of Post and Rogers at the lagoon near Point Barrow that evening, our information is that the ceiling was about 200 feet, and visibility satisfactory. The temperature was reported from 40 to 45 degrees, with neither snow nor ice on either land or water. The next day when Crosson made the flight, practically the same weather conditions prevailed, according to his report.

The fliers departed from Harding Lake at about 2:00 p.m., and landed at a lagoon near Point Barrow shortly after 3:00 p.m.

The lagoon in which Post landed lies almost perpendicular to the coast line and separated from it by a flat sand bar. Since their last accurate navigation check was over 200 miles from that point, naturally, Post could not be sure on reaching the ocean whether Point Barrow was at his right or left. On seeing the huts and the native alongside the lagoon, it was very much in order for Post to land and make sure whether or not Point Barrow was to his right or left. Point Barrow does not show up at a very great distance from the air even with good visibility, so with the low ceiling, the landing and inquiry were quite logical. There could be very little accuracy in the report that Post was having trouble with either the plane or the motor, because he would not have attempted to take off from the lagoon with Rogers as a passenger if both the plane and the motor were not functioning properly. Post probably looked over his plane from the pontoons before the motor was started by hand.

The fliers landed at the lagoon, asked the native the location of Point Barrow, remaining possibly 10 minutes. The Eskimo's first story, before being pressed and possibly confused later by a number of people, was that the plane took off towards the coast line, turned to the right in the direction of Point Barrow, then plunged into the shallow water immediately after the noise from the motor had ceased. While the Eskimo reported that the plane had risen about 50 feet, it seems quite apparent that Post had climbed to a higher altitude, probably almost 200 feet, which was the lower level of the fog bank. The near perpendicular nosing-in of the plane and its turning over on its back would indicate that an altitude higher than 50 feet had been gained prior to its stalling.

It appears reasonable to believe that Post was banking the plane to the right

while still in a slight climb, since with that low ceiling he would turn in the direction of Point Barrow along the coast line immediately after gaining sufficient altitude for maneuvering. He naturally would not enter the fog bank in his last few minutes search for Point Barrow. The combination of the plane in a banking turn, with still low flying speed immediately following the take-off and climb, the motor failure and the airplane's nose heaviness, could result in such a stall. There can be only speculation as to the cause of the motor failure, the motor being buried in the mud underneath some two feet of water. We are inclined to believe that with the moisture in the air as it existed that day, and the temperature as it was reported, ice could have developed in the carburetor. Either that, or the spray from the water in taking off could have entered the scoops and in that way causing icing."

---oOo---

CHANGES OF STATION OF AIR CORPS OFFICERS

To Rockwell Air Depot, Calif.: Capt. Charles M. Savage from Bolling Field.

To Barksdale Field, La.: Major Rufus B. Davidson, 54th Bombardment Squadron, Maxwell Field, Ala. Relieved from temporary rank Sept. 7, 1935 - Major Lloyd C. Blackburn, from Air Corps Tactical School, Maxwell Field, Ala. Relieved from temporary rank Sept. 7, 1935.

To Brooks Field, Texas: Lieut.-Col. Henry J.F. Miller, from duty as Air Officer, 6th Corps Area, Chicago, Ill., to assume command.

To Chicago, Ill.: Major Edmund W. Hill from duty at Advanced Flying School, Kelly Field, upon completion of present course of instruction, to Headquarters 6th Corps Area for duty with Air Corps.

To Randolph Field, Texas: Captain Benjamin B. Cassidy from Hawaiian Dept.

To Fairfield, Ohio, Air Depot: Capt. Joseph H. Hicks from San Antonio Air Depot.

Captain Henry Pascale, Air Corps, was retired August 31, 1935, for disability incident to the service.

The following-named Air Corps officers were assigned to other duties, and they were relieved from temporary rank:

1st Lieut. Millard L. Haskin from station complement, Mitchell Field, to duty with 99th Bombardment Squadron at that station, August 31, 1935.

Captain John T. Murtha from 4th Transport Squadron to 19th Bombardment Group, Rockwell Field, Calif., Sept. 3, 1935.

The following-named Air Corps enlisted men, who qualified as Flying Cadets, are under orders to proceed to Randolph Field, Texas, for flying training, re-

porting on October 10th:

Privates Myers R. Eggert, 71st Service Squadron, Barksdale Field, La.; John M. Ferris, 56th Service Squadron, Selfridge Field, Mich.; Aaron J. Foster, 39th Observation Squadron, Kelly Field, Texas; and Jack F. Todd, 47th School Squadron, Randolph Field, Texas.

---oOo---

COL. JOUETT DROPS IN FOR BRIEF VISIT

Presenting all indications of being in the best of health, a familiar figure dropped in the Office of the Chief of the Air Corps the other day in the person of Lieut.-Colonel John H. Jouett, who resigned from the service over five years ago to enter the business world.

Col. Jouett just recently returned from China, and not more than a month ago the News Letter carried an article on aviation training in China conducted at the Central Aviation School at Shienchiao under the Nanking Government. It was stated in this article that, upon the expiration of Col. Jouett's contract with the Nanking Government as supervisor of this school, on June 1, 1935, he would return to the Company (the Standard Oil Company of Louisiana) which granted him three years' leave of absence to engage in this adventure in a foreign clime, a line of endeavor in which he was perfectly at home.

When with the Air Corps, Col. Jouett qualified both as a heavier-than-air and lighter-than-air pilot. He at one time commanded the flying school at Brooks Field. After a four-year tour of duty in the Office of the Chief of the Air Corps, during the course of which he was Chief of the Personnel Division, he was assigned to the command of the 3rd Attack Group at Fort Crockett, Galveston, Texas. Under his direction, this organization became famous for its unexcelled air discipline and the perfection it had attained in low altitude formation flying. Col. Jouett led the Group in many flights across the entire country.

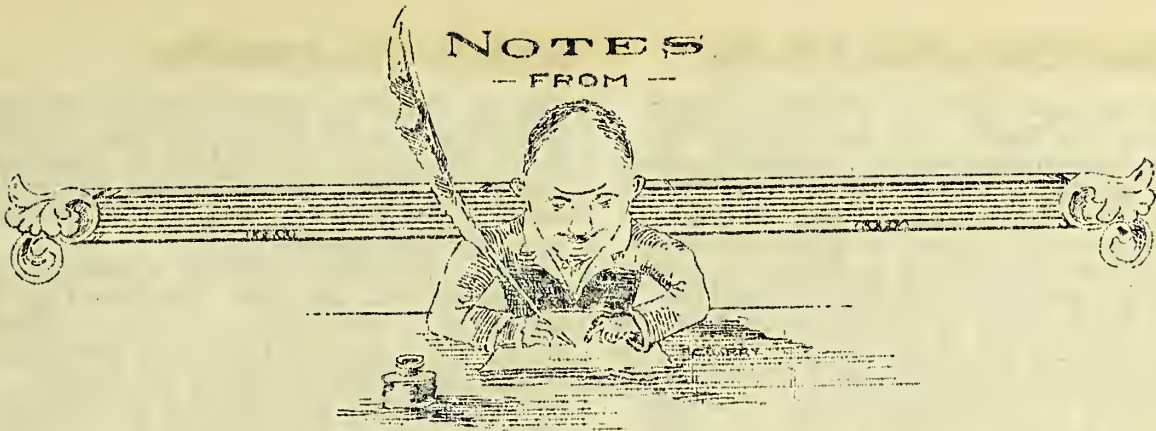
He resigned from the military service on March 4, 1930, and was commissioned in the Air Reserve as a Lieutenant-Colonel.

---oOo---

A Congressional Party recently made a three-day inspection of the military establishments in the San Francisco Bay area. Representatives Parks, Dockweiler, Blanton, Snyder and McMillan were guests at Hamilton Field for luncheon and inspected the installations at the aviation base, also Forts Baker and Barry. In the two following days they inspected Crissy Field, Fort Winfield Scott, the Presidio of San Francisco, Forts Mason and MacArthur, and the Letterman General Hospital. The tours of these military posts were conducted by Major-General Paul B. Malone, commanding 9th Corps Area, and his staff.

NOTES

— FROM —



AIR CORPS FIELDS

Selfridge Field, Mt. Clemens, Mich., Sept. 3.

First Lieut. Norme D. Frost, Air Corps, accompanied by Staff Sergeant Paul J. Fitzpatrick, 27th Pursuit Squadron, flew to Floyd Bennett Airport, N.Y., on August 16th for the purpose of installing a radio station at that field for use in assisting Brigadier-General Frank M. Andrews in setting a record with the Martin Bomber on floats. They returned to Selfridge Field on August 26th.

Sergeant Edward White, 57th Service Squadron, was injured on August 16th when he fell head first into the propeller of a P-26A airplane which was standing on the hangar line with the motor running. His scalp was severely cut, but, in spite of the fact that the propeller was turning over quite rapidly, he was thrown clear and is now recovering from the injuries sustained in the post hospital.

Colonel Louis Brechemin, Jr., Corps Area Surgeon from Chicago, Ill., spent several hours on the post on August 24th. Accompanied by Col. Royce and Major Irwin B. March, the Post Surgeon, Colonel Brechemin inspected the station hospital to ascertain its suitability and capacity for CCC patients. At the present time there are 15 CCC patients in the station hospital. A Navy medical officer and two civilian nurses are attached to the hospital for the care of these patients.

Hamilton Field, San Rafael, Calif., Aug. 31.

Lieut.-Col. Glenn I. Jones, Medical Corps, Flight Surgeon, was on leave of absence for 7 days, beginning August 26th.

Major W.B. Hough, Air Corps, was appointed Public Relations Officer, vice Captain Wilbur Erickson, relieved.

Captain Oliver K. Robbins was appointed Acting Adjutant during the temporary absence of Captain Wilbur Erickson, on leave. Capt. Robbins was appointed Recruiting Officer, vice Captain Erickson, relieved.

Second Lieut. Kenneth R. Kreps, Air Reserve, sailed on the Transport "Republic" for Honolulu on August 22nd.

Brooks Field, San Antonio, Texas, Sept. 6.

Lieut.-Col. Henry J.F. Miller, Air Corps, formerly the Executive Officer of Brooks Field, who was transferred to the 6th Corps Area at Chicago, Ill., as Air Officer, is returning to Brooks Field to take command of the 12th Observation Group and Brooks Field. Particular pleasure is expressed at this assignment, since Col. Miller and family, while stationed at Brooks Field, were popular throughout the 8th Corps Area.

Brooks Field is losing an efficient and well liked officer in Captain Edwin W. Rawlings, who is being transferred to Wright Field, Ohio.

The personnel of the 88th Observation Squadron, L.R. Amphibian, A.C., and their families enjoyed quite an extensive picnic on August 16th at Twin Oaks, San Antonio, Texas, the celebration of the 18th anniversary of the Squadron.

The original 88th Aero Squadron was organized at Kelly Field, Texas, on August 16, 1917, from Oklahoma, Kansas and Texas boys. In October, 1917, the Squadron embarked for overseas duty and participated in all the major campaigns of the American Expeditionary Forces, including the Marne, the Vesle, the St. Mihiel and Meuse-Argonne operations. The Squadron has four enemy planes to its credit, and its losses were approximately 11 pilots and 14 observers killed in action.

The 88th Observation Squadron was transferred from Fort Sill, Okla., Nov. 4, 1931, to Brooks Field, Texas, as part of the 12th Observation Group, Air Corps.

When the new General Headquarters Air Force was organized, the 88th was re-designated as the 88th Observation Squadron, Long Range Amphibian, A.C., and attached to the 7th Bombardment Group of the First Wing, GHQ Air Force at Hamilton Field, Calif. The 88th has been under the command of Major Calvin E. Giffin, Air Corps, since March, 1932. It is now awaiting orders to be transferred to its new station - Hamilton Field.

San Antonio Air Depot, Texas, Sept. 5th.

Friends of Major and Mrs. Robert V. Ignico, Air Corps, this Depot, were saddened by the death of their youngest child, Robert V., Jr., 12 years of age, which occurred at the Station Hospital, Fort Sam Houston, Texas, on August 25th, following an illness of about two weeks. A requiem mass was offered on Monday, August 26th, in the chapel of Our Lady of the Lake College, San Antonio, by Chaplain W.D. Cleary of Fort Sam Houston; and Major and Mrs. Ignico departed the same day with the body for Washington for interment in Arlington National Cemetery. Besides the parents, a sister, Vivian, and a brother, Vincent, survive. Young Bobby Ignico had endeared himself to all at this station, who join in sorrow and extend deepest sympathy to the bereaved family.

Previous War Department orders transferring Major Norris P. Walsh, F.A. (with QMC) from this Depot to Fort Sheridan, Ill., last July, were revoked. Major Walsh, who departed July 6th with his family on a month's leave in Colorado, has been a patient in Fitzsimons General Hospital, Denver, since July 15th. He was promoted to Major of Field Artillery August 26th, with rank from August 1st.

Orders were received transferring Captain J.H. Hicks from this Depot to duty at the Fairfield, Ohio, Air Depot. He and his family have been on leave for a month and 18 days since August 12th, visiting in Wyoming, and it is contemplated that he will complete his leave and return here before proceeding to his new station.

Lieut. (JG) R.R. DeWolfe, USN, of the Naval Air Station, Pensacola, Fla., was a visitor in the Engineering Department of this Depot for several days during a cross-country tour of various aeronautical establishments, conferring on maintenance engineering matters.

Mr. A.C. Dorks, Assistant Secretary, Tenth Civil Service District, New Orleans, La., called at this Depot August 29th in the course of a visit to San Antonio in connection with Civil Service examinations.

Lieut. John F. Hardie, Air Reserve, a prominent insurance man of San Antonio, and an active pilot, is on his fourth two weeks' active duty training tour at this Depot, beginning Sept. 3d.

Captains J.H. Hicks and D.J. Ellinger were relieved from assignment and duties with the new 3rd Transport Squadron at this Depot, and reassigned to the Headquarters of the Depot to continue on their present duties therewith, effective September 1st. The following enlisted men, Privates, are the latest additions to this Squadron, making its enlisted strength now 21: J.O. Guthrie from 68th Service Sqd. August 21st, and T.G. Baker and D.T. Dillon from A.C. Advanced Flying School Detachment, August 27th, all from Kelly Field; E.F. Davidson, Jr., from Station Complement, Brooks Field, August 25th; L.J. Ashcraft (formerly with 81st Service Sqd., Kelly Field) reenlisted August 30th; J.M. Price from 53rd School Sqd., Randolph Field, September 1st.

Warrant Officer Trabold and family returned Sept. 1 from a two months' leave of absence.

Luke Field, T.H., August 16th.

Lieut. Densford, due to leave on the August 22nd Transport for his new station at Randolph Field, Texas, has been active in organizing a Luke Field Pistol team which was slated to shoot it out with the Honolulu Police Force in a match on August 17th.

Lieut. R.H. Wise, formerly a member of the 4th Observation Squadron, now traveling with Mrs. Wise in the Orient, en route to Chanute Field, Ill., reports that he is inexpensively living luxuriously in China and Japan. Friends who will see him when he comes back will see most of the Orient for, from his letters, it appears he is bringing most of it back with him.

Luke Field officers who were on 14 days' detached service at Kilauea Military Rest Camp were Lieut.-Colonel A.N. Duncan, Major L.V. Beau, Capt. D.T. Spivey, Lieuts. E.G. Simenson, J.G. Armstrong, T.S. Moorman and F.S. Henley.

Lieut. D.N. Crickette almost missed a tree at Haleiwa Auxiliary flying field on August 1st when he hit an air bump just after taking off. He flew the plane home with a branch of the tree in the stub wing tank.

Capt. R.D. Johnston and six others from Luke and Wheeler Fields went on an overnight deep sea fishing trip to Molokai. They pulled in two fish, but the ocean did not lose in the exchange of food.

March Field, Riverside, Calif.

While the 34th Attack Squadron was engaged in a week of field maneuvers at Big Bear Lake, Calif., many of the officers' wives and families took advantage of the facilities of the new Air Corps lodge located in this vicinity and enjoyed a week's outing in the mountains with the Squadron - a decided relief from the high temperatures prevailing at March Field.

Fort Sill, Okla., September 3rd.

Lieut. H.F. Gregory, pilot, with Captain W.C. Farnum, passenger, returned August 22nd from an extended cross-country flight and reported their trip, which covered the western half of the country, to be a very interesting one, especially the northern leg from Seattle to Minneapolis.

Staff Sgt. Joseph F. Murray, pilot, with Master Sgt. Ralph J. Rumpel, aide, made a successful free balloon flight to Yukon, Okla., on August 17th, using a 35,000 cubic ft. bag.

Hawaiian Air Depot, Luke Field, T.H.

The Depot Supply Department is now up to full personnel strength, as represented by recent increases for pay of civilian employees. The activities of this Department have steadily increased in recent weeks. Many changes have been necessary to care for this increased

business, until today the place would hardly be recognized by some of the old-timers who were out here a year or more ago.

The Department is busily engaged just at this time in re-writing over 20,000 stock record cards, using the regular form prescribed for this purpose, and this work will soon be completed. Other changes have been or are being made within the office and warehouses, after which the Depot Supply Department will much more closely approximate the set-up in the Mainland depots than has heretofore been possible. A new central filing system with an up-to-date blueprint and technical order file has been established, combining two sets of similar files formerly maintained. The main warehouse has been entirely rearranged, providing space for approximately six thousand additional bins made absolutely necessary due to the increased flying program in force during the present Fiscal Year.

A new Shipping, Receiving and Warehouse Section has been added, greatly facilitating the handling of this business. One main central issue window has been established, doing away with the former method of issuing supplies from different points within the warehouses. Under the new arrangement, only Depot Supply personnel is allowed within the main warehouse.

Conditions in the Engineering Department are somewhat over-stressed at the present time, due to strenuous efforts to meet the present flying program. At present the Engineering Department is completing the overhaul of 7 ships per month. The schedule shows that by January 1st it will be necessary to put out 9 ships per month.

Funds recently received for employment of additional civilian personnel are of great assistance and, it is believed, will enable the Engineering Department to meet the required program. Serious difficulty, however, has been encountered in the employment of satisfactory personnel, due to an absolute lack of mechanically qualified personnel in this Department. It is believed that some system of employing and training apprentices through some special method of local schooling will be necessary to overcome this difficulty. A serious weakness at the present time is due to lack of space in the old depot buildings. An attempt is being made to adapt increased production to an inadequate floor space which, in itself, is the cause of a serious handicap. In addition to this, some of the old buildings are in advanced stages of deterioration. On the other hand, the thought of the development and construction of the new Hawaiian Air Depot, or the new "Hickam Field," precludes any major effort to alleviate this condition.

LIBRARY NOTES

Some of the more interesting Books and Documents recently added to the Air Corps Library

355 H 22. Modern Military Administration, Organization and Transportation, by J.C. Harding-Newman. Aldershot, Gale & Polden, Ltd. 1933. 81p. Author in the above book has confined himself to principles. He considers that details can be applied, for they are only the padding of the principles.

623.4224/W55. Machine Gunner's Pocket Manual: a reference text for officers and enlisted men of machine gun companies in the field, by Captain James E. Wharton and others. Wash. National Service Pub. Co. 1921. 230p.

623.74 H88. Protection of the Civil Population in Chemical Warfare, by F.R. Humphreys. London, St. John Ambulance Association, 1928, 36p.

629.13 Un3 No. 526. Noise from Two-Blade Propellers. Wash. National Advisory Committee for Aeronautics, 1935, 3p. (Report 526).

629.13 Un3teh No. 4109. Cold Temperature Starting Tests of Air Corps Type 1570 engines. Dayton, U.S. Army Air Corps, Materiel Division, August 24, 1934. 30p. (Technical Report No. 4109).

629.145 T46. Marching or Flying by Night without a Compass with Time Table of Direction Stars. London, Hugh Rees Ltd. 1916. 2 vols. Vol. 1. For use in Europe and North America. Vol. 2, for use in Southern Hemisphere.

940.43 R78. Belated Comments on a Great Event, by F. Rowan-Robinson. London, Williams & Norgate Ltd. 1932. 112p. Refers to British participation in the Campaign on the plains of Picardy during the World War.

-----oOo-----



TECHNICAL INFORMATION

ENGINEERING AND NEWS



AIR CORPS MATERIEL DIVISION

Announcement has been made of the Semi-Annual Meeting of the American Society of Photogrammetry, which is to be held at Wright Field on Sept. 16 and 17. The membership of this society, which was founded last year, is composed of about 500 photogrammetric engineers, including the foremost exponents of aerial mapping and photography in the country. Colonel C.H. Birdseye, of the Geological Survey, is President; Major J.W. Bagley, Corps of Engineers, Vice President.

About fifty members are expected to attend the Wright Field Meeting. Colonel Birdseye will preside as general chairman of meetings, with Major Bagley as chairman of the technical meetings. The meeting will be opened with an address of welcome by Brigadier-General A.W. Robins, Chief of the Materiel Division. The following papers will be presented:

Aerial Photography at the Materiel Division, by Captain A.W. Stevens, Air Corps.

Flying for Photography, by Captain H.K. Baisley, Air Corps.

Mapping activities of Tennessee Valley Authority at Chattanooga, by T.P. Pendleton.

The session will also include several social meetings and discussions on "The Multiplex Aero-Projector, led by H.K. Bean, Wright Field; "The Aerocartograph," led by L.H. Caldwell, Wright Field, and other related topics.

MULTIPLEX PRINTER. A multiplex printer, for making diapositives (a positive print made on glass) direct from aerial negatives obtained with standard Air Corps mapping cameras, has been loaned to the Materiel Division by the Pittsburgh District Engineer Office, Pittsburgh, Pa., for test, and will be used in connection with the mapping projects of the proposed Lake Erie-Ohio River Canal to determine if this method of making contour maps will be satisfactory.

LOWER WEIGHT COTTON FABRIC. Weight requirements for airplane fabric, generally referred to as Grade A Cotton, have been standard for several years. Recent developments, however, indicate that a material with a lower weight and equal strength can be obtained and current procurement is being made of cotton fabric with a maximum weight of four ounces

instead of four and one-half ounces.

STANDARDIZATION OF EQUIPMENT ITEMS. Reports have been submitted regarding the standardization of the following items of equipment:

a. Panel and framework assembly, Type A-1, for use with night lighting installations.

b. Aircraft storage battery, integrally shielded, Type C-5.

c. Oxygen cylinders for holding gaseous oxygen for use in aircraft.

d. Utility switches, Types B-1B, B-6B, and B-9A, for use in voltmeter and bomb rack circuits, bomb release and blinker light circuits, and in gun and bomb control circuits.

e. Signal control switches, Type A-1, for use in the operation of signal light circuits.

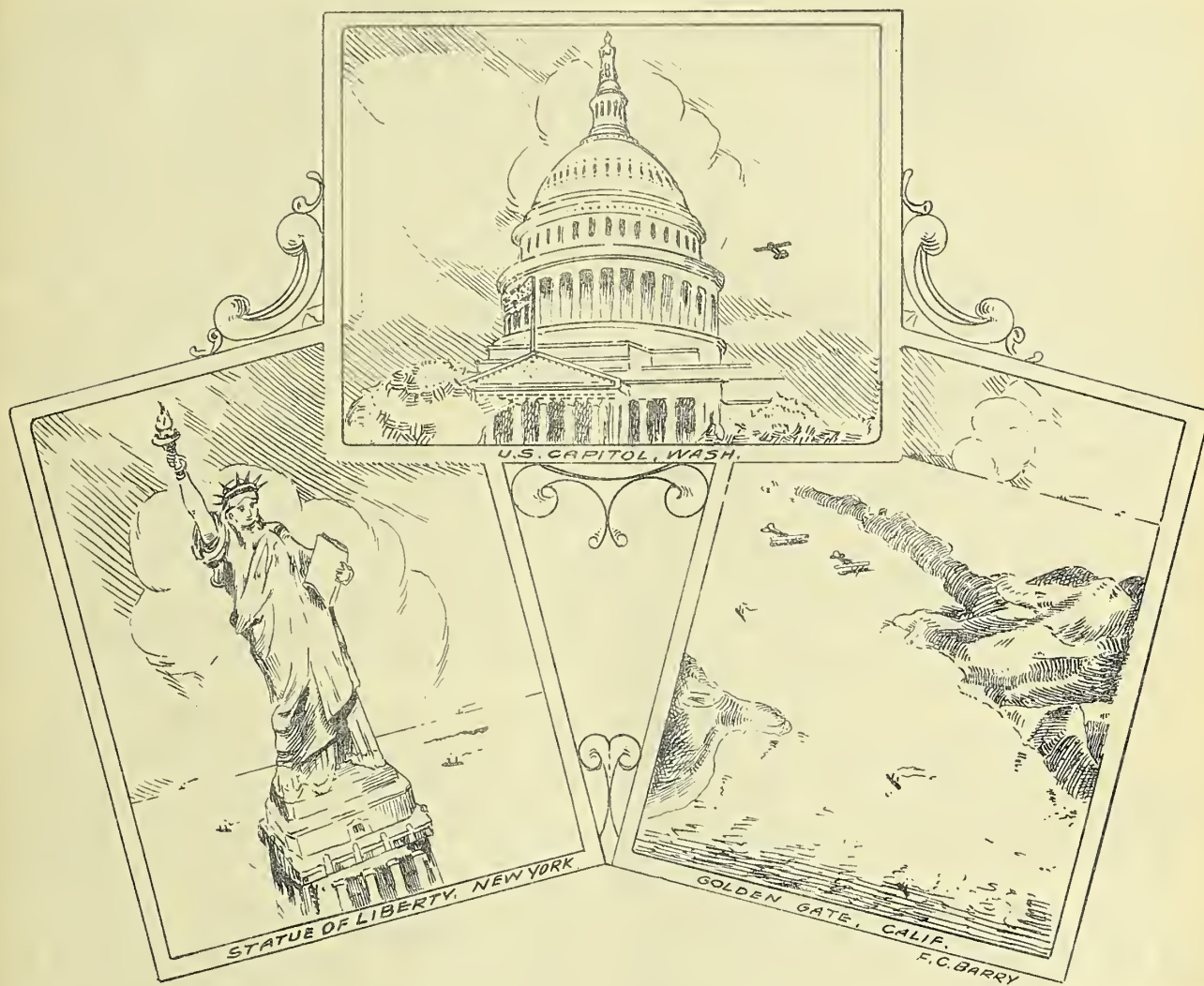
f. Electric power plants, Types E-1 and B-2, for use as an auxiliary source for electric current where a minimum supply is required.

LIFE PRESERVER VEST. The Type B-3 life preserver vest is about to undergo service test. This vest is composed of two superimposed cotton fabric inverted "U"-shaped tubes containing air-tight latex bladders to which is attached a metal CO₂ cylinder holder and discharging device. Each bladder is provided with an additional mouth inflation means by a short rubber tube containing a pillow valve attached at the neck opening on the vest. A fabric back and crotch strap are provided on the lower depending edges for holding the vest in position on the wearer.

---oOo---



AIR CORPS



NEWS LETTER

ISSUED BY
THE OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON.

VOL. XVIII

OCT. 1, 1935

NO. 18

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

"AND I LEARNED ABOUT FLYING FROM THAT."

Frequently the News Letter will publish unsigned articles on this subject with a view to providing two or three minutes of entertainment for the reader and at the same time convey some useful lesson or moral. Contributions will be gratefully received by the Office of the Chief of the Air Corps. In keeping with the policy of the majority of publications that anonymous material is not desired, each article submitted should be signed by the writer.

Any experience in your flying career, the narration of which might aid other pilots, will be a worth while contribution and may actually avert pain, disappointment and expense.

"It was about 9:00 a.m. on a gloomy day in the latter part of March several years ago that I climbed into my P-12 on the hospitable North Beach (New York City) Airport and headed for Newark. A very low ceiling with a thin ground fog was present, but I thought I could make it down over the East River. The airport manager advised against it and said 'Com' on back after you've satisfied yourself.'

It was amazing how rapidly the crossed runways on the point faded out, but anyway the Hellgate Bridge slid by just a little bit below. Lower and lower I came, and ever less and less was the visibility. Suddenly, I wanted to be somewhere else - anywhere but there. A nearly blind turn to the left was the result of my wondering about the buildings nearby. A kind Providence aided a bit and gave me a glimpse of the water. I was just a little above it and heading up the river when a steel span appeared dimly and then was gone rearward, thank goodness. Well, believe it or not, I could not find North Beach, and scooted up the Connecticut shore very low. A little rift in the general direction of Long Island lured me, and I made for it. I was 'somewhere on the Island' but lost completely when suddenly I was greatly buoyed up, for there below me appeared an old 3-motor airplane fuselage long since converted into a restaurant. It looked very familiar to me, but to save my life I could not remember where it was located.

The gilded ball of a flag pole soon passed on my level and a pair of yellow brick chimneys with their tops above me moved by at too close range.

In another moment or two, I came over an area which, except for being soft and wet, would be suitable to land upon. Here a ceiling of about 250 feet was noticed, so I circled it several times. Try as I would, I could not go in any direction, as a nearly zero-zero condition was found.

'Well, I'm all right now anyway,' thought I, 'I'll just circle for a little while, the field will be getting dryer, my plane will be getting lighter, and possibly the weather may clear up a bit.'

It was fifty-five minutes after I located this field, during which time I had circled the area countless times at about 200 feet altitude, when a small rift appeared. A few minutes' flying, and the gilded dome of the Mineola Courthouse suddenly appeared. Later the hangars at Mitchel took shape, and the P-12 slid easily down to the line.

The Operations Officer and the O.D. came out in a hurry. 'Is your name so and so? Well, thank goodness, that's that. About twenty phone calls have come in about a pilot gone cuckoo who circles constantly over an opening - always at the same height and at the same speed.'

These two worthy gentlemen were torn between two conflicting emotions. Should they allow their joy over the safe return of their favorite Pursuit ship blind them to the poor judgment of its pilot in leaving the security of North Beach?

An hour and 55 minutes for the 20 miles from that airport to Mitchel Field is a non-stop record which, so far as known, still stands - but the P-12 was ready for more."

MORAL: Make careful check before leaving. Do not be in too big a hurry to get down when conditions are yet flyable and light and fuel remain.

---oOo---

SPEED RECORD FOR AMPHIBIAN TYPE PLANE

At the Wayne County, Mich., airport on September 15th, Major Alexander de Seversky established a world record of 230 miles per hour with his amphibian, the same one which at Cleveland established a closed course mark of 193 miles per hour. Major and Mrs. de Seversky were guests of Major and Mrs. George P. Tourtellot at Selfridge Field.

V-6867, A.C.

NICHOLS FIELD BOMBERS VISIT IWAHIG

By the News Letter Correspondent

During the days of August 9th, 10th and 11th, five Bombers, under the leadership of Major Thomas W. Hastey, Air Corps, made another of those intensely interesting flights into the Southern reaches of the Philippine Archipelago.

Leaving Nichols Field at 8:00 a.m., August 9th, the flight proceeded to San Jose, Mindoro, where a short stop was made for refueling. Proceeding therefrom, they continued to the Island of Palawan and landed on the new landing field at Iwahig, the famous Penal Colony of the Philippines, about 400 miles from Manila.

Iwahig is one of the most unique penal colonies in the world. A branch of Manila's famous Bilibid Prison, it operates under the theory that, if a so-called criminal is given a better condition in which to live than crime can furnish him, he will cease his criminal tendencies. Iwahig is a huge farm on which is maintained a large coconut plantation and a stock farm for hogs, cattle and poultry. On this farm the colonists who go there work and live very much like the members of a military organization.

There is a total of 1531 people living in Iwahig. Of this number, only 25 are civilian employees, 1250 being colonists who go there on their good behavior. The remaining 256 are wives and families of colonists who are permitted to live with their men, in separate houses. The other colonists live in big buildings like an army barracks.

There are no barred windows and no armed guards. Each man is assigned a job he can do, and he does it because if he does not perform according to regulations he will be sent back to Bilibid. Escape from the Island would be next to impossible, but even were it easy there would be little danger of these colonists trying to escape, because they live under much more favorable conditions here than they did before their incarceration. In fact, it amounts almost to tragedy when one has served his sentence and is dismissed.

The personnel of the flight were entertained royally while at the colony. A four-course meal was served, consisting of soup, barbecued pig, boiled rice with curry sauce, and boiled chicken necks. This fare is far superior to the average native peasant's meal which would be boiled rice and fish.

After the evening meal, a dance was staged for the benefit of the visitors, and the next morning a personally conducted tour was made over the farm and through the buildings of the colony.

Leaving Iwahig about noon of the 10th, the flight proceeded to San Jose, Mindoro, where the personnel remained over night, refueled and serviced the

planes. After another unique supper, a boxing match was put on for their benefit.

Soon after leaving Iwahig another interesting spot was passed when they flew over the Culion Leper Colony in Northern Palawan. This is the largest Leper Colony in the world. The planes flew low over this colony and several interesting pictures were taken. Although this flight did not land at Culion, there is a good landing field there, and a number of Air Corps officers have landed there at various times recently.

On the following morning, the flight proceeded to Nichols Field. In addition to Major Hastey, the following-named officers made the trip: Captains John S. Mills, Julius T. Flock, George W. Hansen and 1st Lieut. Carl A. Brandt. Sixteen mechanics, radio operators and photographers also accompanied the flight.

---oOo---

FLOOD RELIEF WORK IN THE PHILIPPINES

Exceptionally hard and unceasing rains caused serious floods in Central Luzon, isolating Clark Field and Fort Stotsenburg, and stopping all rail and motor transportation both to the south and north. For a period of about ten days the pilots of the 3rd Pursuit Squadron, Clark Field, were able to perform a real service by aiding in the inspection of the flooded areas, flying food and water to those stranded away from the post, and carrying mail, etc., from Manila to Fort Stotsenburg.

The 3rd Pursuit Squadron is well started on its training schedule, despite the handicaps of the rainy season and resulting bad weather.

---oOo---

PURSUIT GROUP FIELD EXERCISES IN VIRGINIA

The 36th Pursuit Squadron at full strength participated in the 8th Pursuit Group Field Exercises recently held at Virginia Beach, Va., for a period of five days.

The squadron was organized as follows: 12 pilots regularly assigned; 3 pilots attached from the 33rd Pursuit Squadron; 3 pilots attached from the 37th Attack Squadron; 6 pilots attached from the First Pursuit Group; 4 pilots attached from the 9th Bombardment Group. The equipment comprised 7 P-12F's, 5 P-12K's, 6 P-6E's and 3 A-8's.

The Exercises consisted of the following phases: Moving the Squadron at full strength to the advanced airdrome at Virginia Beach, as part of the 8th Pursuit Group; establishing a camp in the field and performing one to three missions daily for five days, using eighteen planes on each mission; the loading of bombs and ammunition; the refueling and maintenance of airplanes and returning the organization to Langley Field.

"Special mention should be made of the V-6867, A.C.

flying done by the visitors," says the News Letter Correspondent. "Both the Selfridge and Mitchel pilots were called on to fly the Langley String Formation with practically no chance for any advance practice. The Selfridge Field pilots were assigned to the P-6E's, and after their first introduction to the new formation were right 'at home.'

The boys from Mitchel Field, though, were confronted with the double difficulty of flying an entirely new formation and trying to make an Observation ship act like a Pursuit ship. By taking advantage of their opportunity to 'cut corners,' they were always in their approximate position. Their flying, as a whole, was done in a very commendable manner."

---oOo---

GENERAL FOULOIS HONORED BY INSTITUTE OF THE AERONAUTICAL SCIENCES

At a meeting on September 19th of the Council of the Institute of the Aeronautical Sciences, R.C.A. Building, Rockefeller Center, New York City, Major-General Benjamin D. Foulois, Chief of the Army Air Corps, was elected an Honorary Member of the Institute. The following citation was part of the resolution enacting this election:

"For his courageous foresight in laying the foundation of military aviation; in recognition of great personal sacrifices made in pioneering a field which has become a major factor in the national defense of all countries; for advoca-

cy of the premier position aircraft should occupy in commerce and military strategy; and for his leadership in utilizing the aeronautical sciences for the technical development of the flying equipment of the Army."

General Foulois is only the second person to be thus honored, the other being Dr. Sylvanus Albert Reed, whose contribution to the progress of aviation was the invention of the famous Reed metal propeller, in recognition of which he was awarded the Collier Trophy in 1926.

---oOo---

LIEUT.-COLONEL WELSHMER LEAVES AIR CORPS TACTICAL SCHOOL

Lieut.-Colonel Robert R. Welshmer, Coast Artillery Corps, genial Instructor at the Air Corps Tactical School, Maxwell Field, Ala., has received orders transferring him to the Infantry and assigning him to duty with the 8th Infantry at Fort Moultrie, South Carolina. He returned recently from leave of absence and is preparing to depart very soon for his new station.

Col. Welshmer has been stationed at Maxwell Field since September, 1931, when he was detailed as a student for the 1931-32 class at the Tactical School. Immediately upon graduation, he was detailed as an Instructor and performed duties as Chief of the Fourth Section, Coast Artillery Instructor, Anti-Aircraft Artillery Instructor, Military Intelligence Instructor and Instructor in Military Geography during his tour at the school.

Col. Welshmer is one of the few officers on duty with the Army who are graduates of the United States Naval Academy, from which he graduated in 1908. In addition to attending the University of Illinois for 3½ years prior to his appointment as a midshipman, he is a graduate of the following Army schools since his entry into the service:

Distinguished graduate, Coast Artillery School, class of 1915.

Coast Artillery School, Advanced Course, class of 1927.

Command and General Staff School, class of 1928.

The Air Corps Tactical School, class

of 1931-32.

During 1917, Col. Welshmer served first as an instructor in organization and first course of the Heavy Artillery School, A.E.F., and immediately upon returning to the United States in 1918, was appointed Senior Instructor and later Commandant of the Coast Artillery School. He holds the Distinguished Service Medal, received in 1918.

He was later detailed as Senior Instructor, Coast Artillery, California National Guard, from 1920 until 1922; Instructor, Command and General Staff School, 1928 until 1931, and later as Instructor at the Tactical School from 1932 until his transfer.

In addition to his many details as Instructor in the different schools, Col. Welshmer has served as a member of the Coast Artillery Board, as Editor of the Coast Artillery Magazine "Liaison" and the "Journal of the U.S. Artillery," and as Commanding Officer of the 63rd Coast Artillery, Anti-Aircraft.

He has made a host of friends at Maxwell Field and in Montgomery, and the best wishes of them all accompany him upon his new assignment at Fort Moultrie.

Major Benjamin F. Harmon, Coast Artillery Corps, has been detailed to replace Col. Welshmer as Instructor and Chief of the Fourth Section at the Tactical School.

---oOo---

The News Letter solicits pen and ink drawings of cover designs. These will be gratefully acknowledged when published.

V-6867, A.C.

MARCH FIELD PERSONNEL SHOW THE WAY IN SKEET SHOOTING

By the News Letter Correspondent

Skeet shooting virtuosos of March Field completely vanquished the shotgun quintets of Hamilton and Rockwell Fields on September 5th in a Wing Championship Match held during the concentration of the First Wing at March Field. The March Field Skeeters scored 116 points out of a possible 125. Hamilton Field trailed with a tally of 87, while Rockwell Field made a close third by popping 82 discs.

The outstanding performance of the day was a perfect score of 25 hits out of 25 discs by the team captain, 2nd Lieut. Junius W. Dennison, Air Reserve. By making the highest March Field team score for the day, he won the brassard offered by the National Skeet Shooters Association for the club champion.

Runners up for the brassard were Lieut. Frederic C. Gray, Jr., and Lieut. Calvin E. Peeler with 24 each. Another high scoring Reservist was Lieut. John Hilger with 22 hits. The only regular army officer on the squad, Major Harold Albaugh, of the Medical Corps, smashed 21 of the elusive discs.

Members of the second place Hamilton Field squad were Captains Donald J. Keirn, Walter R. Agee, Donald Lyon, and 2nd Lieuts. Alexander Burton and Edward Virgin of the Air Reserve. Hamilton's chief shooter was Captain Keirn.

The Rockwell Field five comprised Lieut.-Colonel H.C. Davidson, Captains Robert Williams, Westside T. Larson, 1st Lieut. J.T. Murtha and 2nd Lieut. Dolf Muhleisen, former March Field tennis star.

Although Skeet was entirely unknown at March Field a year ago, it is now one of the major sports activities of the officers of the garrison. In twelve months, March Field skeet shooters have so improved their shooting that they have been able to win trophies all over Southern California in competition against expert civilian trap shooters. This rapid advance may be partly accounted for by the fact that the Army furnishes 50,000 rounds of ammunition a year to Air Corps officers on duty at March Field. The Army believes that skeet shooting helps to develop excellent machine gunners inasmuch as the targets are moving in both cases.

Second Lieutenant Dennison, team captain at March Field, is enthusiastic about the opportunities that skeet offers to pilots wishing to perfect themselves as aircraft machine gunners. Because targets are fired at from eight different positions, skeet shooting bears some resemblance to aerial gunnery, Lieut. Dennison stated.

Among Regular Army officers, skeet has a great number of enthusiasts.

Major Ira C. Baker, who recently left March Field for Maxwell Field, Ala., is an enthusiastic skeeter. Major Virgil Hine, who commands the 95th Attack Squadron, is one of the best shots on March Field.

Lieut. Gray has attained the highest average since the inauguration of the sport at March Field - 96%. This officer was recently awarded the Frank Luke Trophy for the best aerial pursuit gunnery performance of the year, his score being 1176 out of a possible 1750 points. Other officers with good records are Lieut. Dennison with 94%, Lieuts. Calvin S. Peeler and John Hilger with 88%, and Lieut. Roscoe Dunahoo with 82%. All of these officers have won valuable prizes in recent months by competing against crack civilian skeet shooters of Southern California.

One of March Field's star skeet marksmen, Lieut. Dennison, with one perfect score of 50 straight and nine of 25 straight, has won four prizes, one of them for finishing in second place in the Southern California Skeet Association shoot. Other leading prize winners are Lieuts. Dunahoo and Peeler with five 25 straights and one 50 straight, Lieut. Gray with four 25 straights and one 50 straight, and Lieut. Hilger, winner of two trophies.

---oOo---

SERGEANT PRICE LEAVES THE AIR CORPS

Sergeant, A.M. 1st Class, John H. Price, pilot, 3rd Transport Squadron, was honorably discharged by purchase at the San Antonio Air Depot on September 6th. He has a long record of especially able and efficient service. Entering the World War as a private in the Aviation Section, Signal Corps, he soon received a commission, and served for one year and eight months as a First Lieutenant in the Air Service. After the war he joined the Marine Corps, and served from 1923 to 1926 in Haiti as a Master Sergeant. Returning to civil life, he was employed for three years as Chief Pilot of the Pan American Airways. He reentered the Army in 1930 as a Sergeant in the Air Corps at Randolph Field.

While a member of the 67th Service Squadron at that station, he was placed on detached service at the San Antonio Air Depot on June 7, 1932, as one of the first pilots of the air transport service, continuing on that duty since that date, and having been transferred to the new 3rd Transport Squadron on its organization on July 5, 1935. He has been for many years a pilot of outstanding skill, with over 6,900 pilot hours to his credit, and with only one accident in his entire career, this on March 6, 1935, when motor

trouble necessitated him taking to his parachute, as reported in the News Letter of May 15, 1935.

Sergeant Price, as a Captain in the Air Reserve, is expecting orders for active duty with the Civilian Conserva-

tion Corps in the Fourth Corps Area.

The many friends of Sergeant and Mrs. Price in the vicinity of San Antonio sincerely regret their departure and extend heartiest wishes for success in their new field.

---00o---

SUCCESSFUL TEST OF UTILIZATION OF AIRPLANES AND RADIO IN "MAN HUNT."

By Lieut. Ellsworth C. French, Washington National Guard

Two voice radio experiments of interest with the new SCR-AA-185 sets were successfully completed recently by the 41st Division Aviation, Washington National Guard, Felts Field, Spokane.

What may be a record for voice communication with the new military airplane radio sets was established in communication with the ground station of the Washington State Highway Department in Olympia, a distance of about 300 miles from Felts Field.

Perfect voice conversation was carried on between the pilot and observer with Lacey V. Murrow, Director of Highways, who operates 12 stations, 50 watts each, in various parts of the State of Washington.

Because he is himself a pilot, Director Murrow has authorized the cooperation of his highway department stations with airplanes in providing weather information. Upon leaving any airport in the State, where a highway department radio station happens to be located, contact is kept with the airplane throughout its flight, thus making it possible to secure weather information at any time.

Recent bank robberies in the vicinity of Spokane, involving the murder of bank employees, prompted Chief of Police Ira Martin, of Spokane, to ask for a radio experiment with the 41st Division Aviation and his ground station of 100 watts.

A radio problem was, therefore, worked out between four airplanes of the Squadron, the police ground station and radio prowl cars, the sheriff's radio cars and cars of the State police.

What started to be only a problem, however, turned out for a time to be a real "Man Hunt." Upon establishing communication with the police radio, "all cars and airplanes" were ordered to look for a Model A, Ford Coupe, green panel body, wanted in connection with the murder of the constable at Newport, Washington.

Within 15 minutes after the above announcement, the Ford car was picked up in Spokane by prowl car officers. The experimental radio problem continued, with the police ground station giving a description of the project automobile, so called bandit car.

The occupants of the car, Chief Martin and Police Commissioner A.B. Colburn, were supposed to have robbed a bank.

Their general departure from Spokane was given, as well as the description of their automobile.

Within 20 minutes after the announcement of their departure, one of the squadron radio planes picked up the fleeing automobile and notified the police ground station, which took command of the situation, ordering all cars and airplanes in the direction of the fleeing car.

The airplane in pursuit of the car then gave constant advice as to the location of the car as it flew above, thus keeping all airplanes and cars advised of the proper location. Soon all four airplanes were circling over the bandit car.

To make the experiment more realistic, flour sacksbombs were hurled at the automobile, one bomb striking the rear of the car and two landing in the middle of the road about 25 feet in front of it. Fixed and flexible camera guns were used to fire on the automobile, and the 116th Photo Section photographed the machine to demonstrate the clearness with which it could be seen.

Following the direction of the radio airplane, the radio-equipped automobiles, filled with officers, soon surrounded the "bandit car."

"It was a perfect demonstration and proves that we can use to a very great advantage radio-equipped airplanes in trailing bandits," reported Chief Martin. "No car could have survived the rain of bombs that fell from those airplanes, and the aerial camera gun film showed what could be done by the real machine guns."

Spokane police next want to conduct a similar experiment, this time the attempt being to keep a so-called bandit car from entering Spokane.

---00o---

Another record for hours per pilot is the goal of officers of the 41st Division Aviation, Washington National Guard.

"We are not satisfied with our accomplishment of last year, and therefore have fixed a goal for ourselves of 250 hours per pilot for the fiscal year 1936," said Capt. Claude Owen, Operations Officer of the 116th Observation Squadron. "It was not difficult for our pilots to average about 237 hours per pilot last year, and I am confident we can attain our new goal." The Squadron is seeking an additional allowance for gasoline.

Rifles spitting blank cartridges, Coast Artillery searchlights probing the night air for Pursuit planes and speedy Bombers, airplanes dropping love tokens in the shape of noise bombs, all were thrilling features of a night attack by air on San Diego's Exposition on the night of September 6th.

The aggressors were the Pursuit planes of the 17th Attack Group from March Field and the Martin Bombers from the Seventh Bombardment Group from Hamilton Field and the 19th Bombardment Group from Rockwell Field. Defenders of the Exposition's Grounds were the 63rd Coast Artillery from Fort MacArthur, Los Angeles Harbor, and the Provisional Company of 30th Infantry from Camp George H. Derby, Exposition Grounds.

The sham battle was the climax of

three days of mock air attacks, starting September 4th and ending September 6th. The culminating feature of the Wing concentration was the Wing Review of over 60 planes, held at Rockwell Field, Coronado, on the morning of September 7th. At the conclusion of the air parade, the Seventh Group left for Hamilton Field, under the command of Lieut.-Colonel Clarence L. Tinker, and the 17th Attack Group, commanded by Major Walter R. Peck, left for its hangars at March Field.

The mimic battles between the Coast Artillery and the Air Corps were watched closely by Major-General Paul B. Malone, Commanding General of the 9th Corps Area, who was reported as saying that he was pleased with the showing made by the Army units in both the day and night displays.

---oOo---

UNITED STATES TAKES THE LEAD IN AERONAUTICAL RECORDS

According to an article in the September issue of the "National Aeronautic Magazine" by Mr. William R. Enyart, Secretary of the National Aeronautic Association Contest Board, the United States now holds 45 records in aviation, with the prospects good for securing quite a number of additional records in the very near future.

This is quite a different situation from that which existed last July. A copy of the Official Bulletin for July of the Federation Aeronautique Internationale, the world's aviation governing body, which listed a grand total of 111 aeronautical records, both heavier-than-air and lighter-than-air, gave France the lead with 45 records; the United States with 31; Italy, 21; Germany, 10; Poland, 2; and Great Britain and Spain, one each. In lighter-than-air aviation, the United States was given the lead with 10 records, followed by France with 5; Germany, 4, and Poland, 1.

In the feminine category, wherein 12 heavier-than-air records were listed, the fair sex of France held the lead with 7 records; followed by those of Sunny Italy with 3, and those of the good old U.S.A. with 2.

Mr. Enyart goes on to say that Sergievesky, Musick, et al, gave the drive of the United States for additional world's aviation records a flying start with their ten records set with the Sikorsky S-42. D.W. Tomlinson's addition of nine marks to the U.S. holdings with the TWA Douglas DC1 was a great help. He also mentions three world's records established by Benjamin King, of Washington, D.C., who flew a diminutive Aeronca Seaplane; Lieut.-Commander Stone and Lieut. Burke, of the U.S. Coast Guard, who flew Grumman Amphibians; Helen MacCloskey, flying a

Monocoupe; Art Chester in his Chester Special and Maxine Bennett in a Spartan.

It may be mentioned, incidentally, that of the ten records established by Col. Lindbergh, Boris Sergievsky and Edwin Musick in the Sikorsky S-42, three were recently surrendered to Brigadier-General Frank M. Andrews, Air Corps, as mentioned in the previous issue of the News Letter.

If the speed record of approximately 350 miles per hour, set by Howard Hughes on September 13th at Santa Ana, Calif., is confirmed by the Federation Aeronautique Internationale, America will gain another record, this one at the expense of France, for up to this time Raymond Delmottee, a Frenchman, is credited with this record - 311.319 miles an hour, made last Christmas day in a Caudron monoplane, powered with a Renault motor.

Hughes was reported to have flown in a series of six flights over a closed course at a speed of 353 miles per hour on his first dash; 337 m.p.h. on his second; 350 h.p.h., 340, 350 and 353 m.p.h. on his third, fourth, fifth and sixth dashes, respectively. His airplane, a low-wing metal monoplane, is powered with a 14-cylinder 1,000 horsepower "Wasp" motor.

---oOo---

ATTACK PILOTS IN PINE CAMP MANEUVERS

Three A-8 Attack planes of the 37th Attack Squadron, Langley Field, Va., were recently flown by Lieuts. Hale, Grussendorf and Sutherland, accompanied by Sgt. Hayes, Sgt. Mayton and Pvt. Hanky, to Watertown, N.Y., to participate in the First Army Maneuvers held at Pine Camp. During the eight days these planes were at the scene of "hostilities," they were used to lay two smoke screens, one for the Reds and one for the Blues. Very excellent results were obtained due to the ideal weather conditions prevailing at that time.

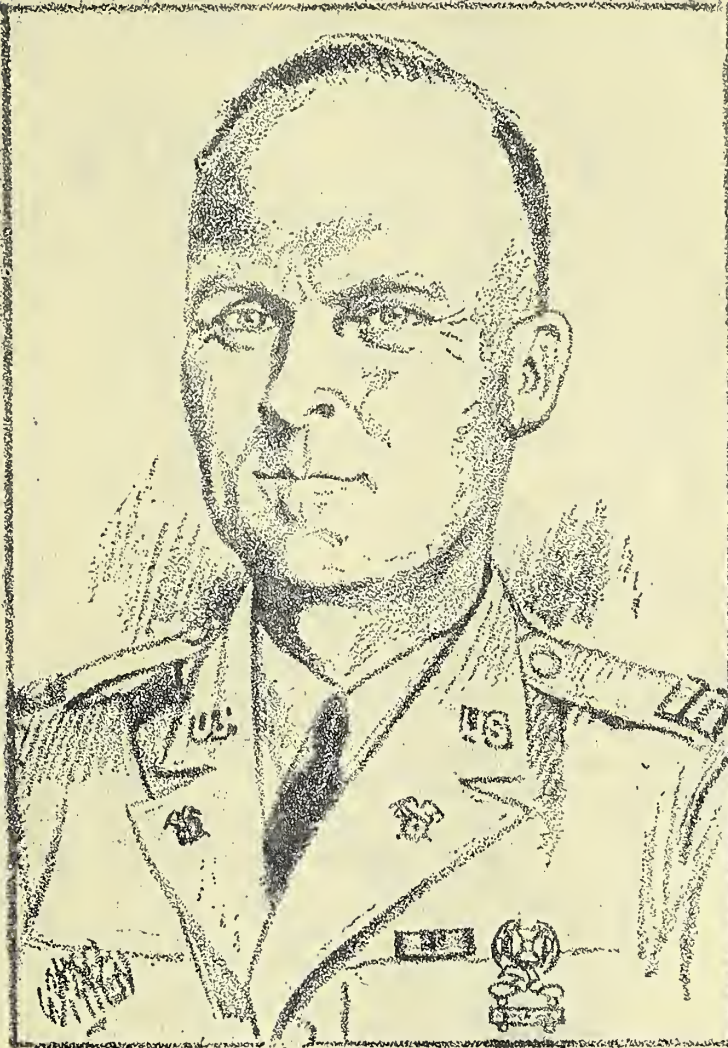
HICKAM FIELD TO BE MINIATURE CITY WHEN COMPLETED

Plans for Hickam Field, to have an area of more than 2,500 acres, and ultimately to cost more than five million dollars, were recently approved by Major-General Hugh A. Drum, Commanding General of the Hawaiian Department.

The immediate construction of the Army's great airport will involve four double hangars, one operations hangar, the necessary water, sewer and roads system, and construction of the landing mat or runway.

Upon its completion, the field will contain quarters for about 180 officers, 175 non-commissioned officers, and barracks for 1600 enlisted men. Four additional double hangars, making a total of eight, will be constructed as soon as funds become available; also a machine shop and the necessary warehouses. When the President signed the Second Deficiency Act, he made available \$4,500,000 for the Army's great flying field near Fort Kamehameha, which the War Department designated "Hickam Field," in honor of Lieut.-Colonel Horace M. Hickam, Air Corps, who was killed in an airplane accident at Fort Crockett, Texas, November 5, 1934.

It is expected that approximately two and one-half years will be consumed in the construction of the new field. The officers' quarters will be of the latest individual bungalow type, in many respects following the local architecture, and constructed to meet the climatic conditions of the Hawaiian Islands. These quarters will be modern in every respect, embodying all of the latest features and equipment. The barracks and the hangars will be of the latest design. The



Captain Howard B. Nurse, QMC, Constructing Q.M.

layout of Hickam Field will resemble a small modern city, with broad boulevards, sidewalks, street lighting system, telephone system, fire department, public school and the utilities and facilities comprising a modern progressive community.

Landscape gardeners are already at work on the site, cultivating shrubs, plants and trees.

There will be over 20 miles of paved roads, with broad tree-lined boulevards affording direct communication and vistas to focal points.

The barracks for the enlisted men will be a radical improvement over the old time buildings to which they have become accustomed. They will contain lounging and reading rooms, a modern dining room with cafeteria service, and a thoroughly up-

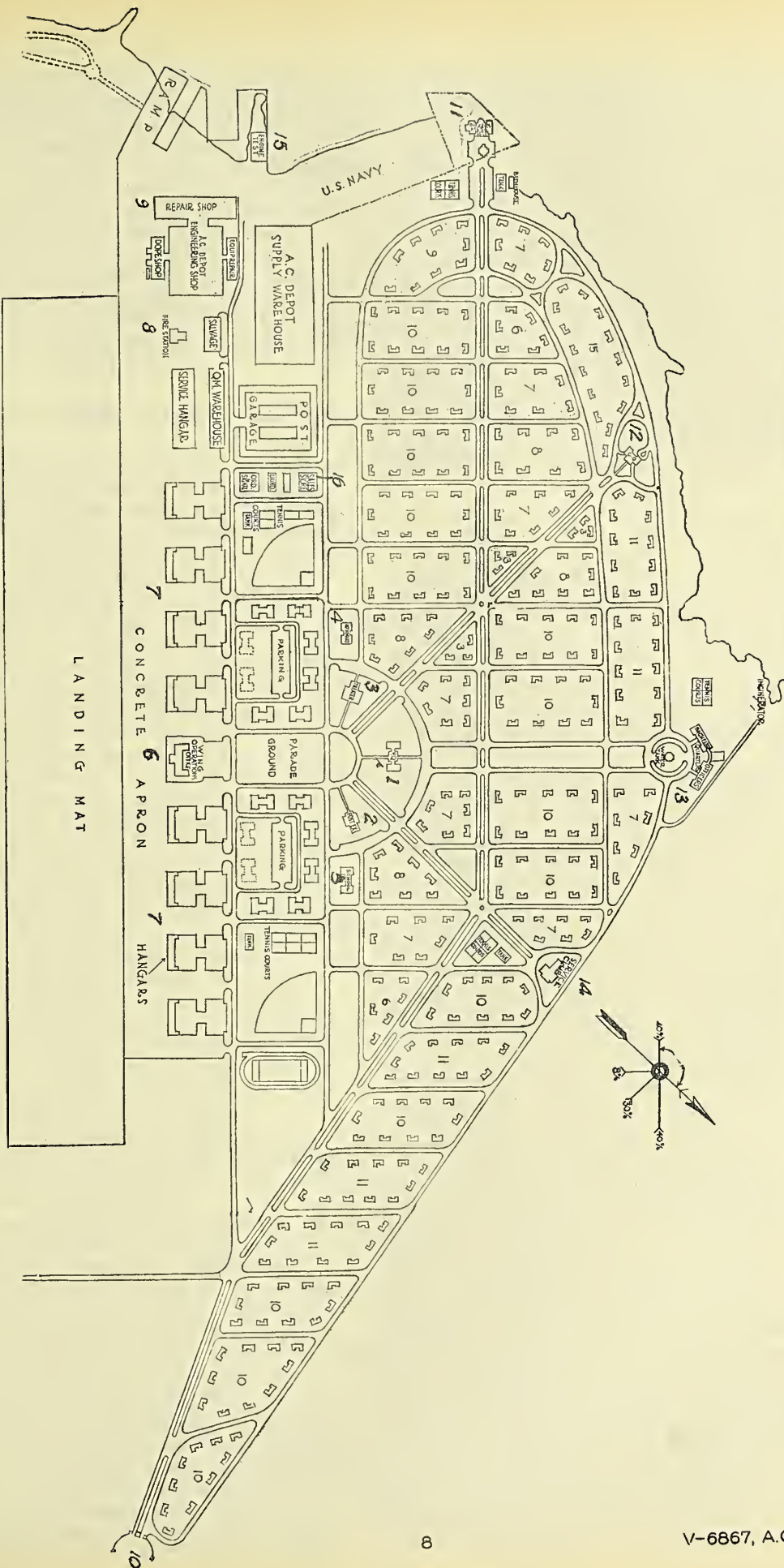
to-date kitchen, where there will be machinery for the manufacture of ice cream, and what is perhaps more important to enlisted men averse to kitchen police details, a machine for the peeling of spuds.

The Air Corps Depot will include very large steel and concrete buildings, consisting of shops for the major overhaul of airplanes, and buildings for warehousing facilities.

In the reproduction of the blue print plans for the various projects to be included in the construction of Hickam Field, it will be noted that at either side of the parade ground are the barracks for the enlisted men. Due to the reduced size of this blue print reproduction, some of the features of this big project are numbered for ease of identification, viz: 1. Post Headquarters; 2. Post Exchange; 3. Post Theatre; 4. Post Infirmary; 5. Post Schools; 6. Wing Operations Office;

V-6867, A.C.

LAYOUT OF PROPOSED MAMMOTH AIRDROME AT HICKAM FIELD WHERE WORK IS SOON TO BEGIN



7. Double Hangers; 8. Post Fire Station; 9. Repair Shops, Engineering Shops, Equipment Repair; 10. Entrance Gate; 11. Officers' Club, with Bath House and Tennis Courts; 12. Quarters of Post Commander; 13. Bachelor Officers' Quarters facing water tank with Incinerator in rear; 14. Service Club; 15. Engine Testing Shop; 16. Sales Store, Ice Plant, Post Laundry, Ordnance and Signal Property.

Major Don L. Hutchins, Air Corps, and Capt. Howard B. Nurse, Quartermaster Corps, were ordered to the Hawaiian Department last June to supervise the construction of Hickam Field.

---oOo---

CAPTAIN HOWARD B. NURSE, QUARTERMASTER CORPS

One inclined to delve into the history of Army posts will find the name of Captain Howard B. Nurse, Quartermaster Corps, intimately linked with two of the most beautiful flying fields in the United States, if not in the entire world, these being the Air Corps Primary Flying School at Randolph Field, San Antonio, Texas, and Hamilton Field, San Rafael, Calif., the home of the Seventh Bombardment Group, Air Corps. Captain Nurse was the Constructing Quartermaster during the construction of Hamilton Field, and when the plans were laid for the construction of the veritable city which houses the Air Corps Primary Flying School, he was on duty in the Quartermaster General's Office, Washington, D.C., as Chief of the Design Section.

Hamilton Field, which the News Letter Correspondent from that station stated is accorded the distinction of being the most beautiful of all Air Corps posts, was designed and built by Captain Nurse on a plan which took advantage of the natural beauty of the locale. As stated in a recent article describing Hamilton Field, it is a little Spanish village just sprung from the hills, the homes, truly Spanish in character, being scattered so as to take advantage of the view of San Pablo Bay to the east and the Coast Range Mountains to the west.

And now with his task at Hamilton Field well done, Captain Nurse several months ago was sent to Hawaii to supervise the construction of the new Hickam Field.

Born December 12, 1881, in Rochester, N.Y., Captain Nurse graduated from high school in 1900, and from the Rochester Mechanics Institute in 1904. He worked in an architect's office for several years, and later, as a New York State registered architect, practiced in Rochester for ten years. During the War, he entered the second officers' training camp at Fort Niagara, N.Y. Commissioned a Captain, he was ordered to duty in the Construction Quartermaster's Division at Washington, D.C., where he served all during the war period. His division supervised the construction in all camps west of the Mississippi River and new warehousing projects. From 1919 until 1923 he was engaged

in the completion of the \$5,000,000 storage depot at Schenectady, N.Y.

Ordered to the Philippines in 1923, Captain Nurse for the next 2½ years served at Camp John Hay, at Baguio, as Post Quartermaster. Returning from the Islands in 1926, he took up his duties as Construction Quartermaster for all posts in the vicinity of New York, with headquarters in New York City. Six months later he was ordered to duty in Washington in the design and engineering branch of the Quartermaster General's Office.

His next assignment was that of Construction Quartermaster at San Antonio and vicinity, and from there proceeded to duty as Construction Quartermaster for San Francisco and vicinity, during the course of which he took over the Hamilton Field construction project.

---oOo---

MAJOR DON L. HUTCHINS, AIR CORPS

Major Don L. Hutchins, Air Corps, who so ably represented the Air Corps for two years in the construction of Hamilton Field, and who is now again associated with Captain Nurse in the construction of Hickam Field, is an officer who has had experience in general engineering and construction work. He was born September 17, 1894, at Van Meter, Iowa, and was educated in the elementary schools and high school in that city. He attended the Highland Park Technical School at Des Moines, Iowa, and later studied mechanical engineering and drafting while engaged in the automobile industry.

During the War, he enlisted in the Aviation Section, Signal Corps, and served as Private and Corporal at the Army Balloon School at Fort Omaha, Nebraska, from April to October, 1917. He then pursued a course in ballooning at this school and, qualifying for the duties of a commissioned officer, was appointed a second lieutenant on February 13, 1918, and placed on active duty at Fort Omaha. Subsequently transferred to the Army Balloon School at Camp John Wise, San Antonio, Texas, he served as Assistant Flight Instructor, also as instructor in observation, panoramic drawing, drafting and engineering. In October, 1918, he was detailed as Post Engineering Officer and as Commanding Officer of the 95th Balloon Company.

In February, 1919, Major Hutchins was transferred to Akron, Ohio, to pursue a course in dirigible training. In July of that year he was transferred to Langley Field, Va., where he was placed in command of the 19th Balloon Company. Following a course in navigation at the Naval Navigation School at Pensacola, Fla., he was ordered to duty as airship officer with the 8th Balloon Company at Fort Bliss, El Paso, Texas. Later he served as Operations Officer of the 1st Airship Group. In December, 1922, he was transferred to Scott Field, Belleville, Ill. He was a member of the crew of the Airship C-2 on its transcontinental flight to the Pacific Coast and return, which flight

(Continued on page 19).

PROMOTION OF AIR CORPS OFFICERS

Special Orders of the War Department, recently issued, announced the promotion of officers of the Regular Army, with rank from August 1, 1935. A total of 4310 officers of the Regular Army received promotions - 148 Lieutenant-Colonels to Colonel; 501 Majors to Lieut.-Colonel; 1380 Captains to Major; 1532 1st Lieutenants to Captain and 759 2nd Lieutenants to 1st Lieutenant. There were also promoted 19 officers of the Veterinary Corps (7 1st Lieutenants to Captain and 12 2nd Lieutenants to 1st Lieutenant); 4 Chaplains (1 Lieut.-Colonel to Colonel and 3 1st Lieutenants to Captain); and 30 officers of Philippine Scouts (7 Majors to Lieutenant-Colonel, 5 Captains to Major, 16 1st Lieutenants to Captain, and 2 2nd Lieutenants to 1st Lieutenant).

Air Corps officers who received promotions are enumerated below, as follows:

To Colonel

Lieutenant-Colonels:

Henry Conger Pratt
Gerald Clark Brant
Ira Longenecker
Frank Maxwell Andrews
Oscar Westover*
Henry Black Clagett
Jacob Earl Fickel
Rush Blodgett Lincoln

To Lieutenant-Colonel

Majors:

Frank Dorwin Lackland
Herbert Arthur Dague
Harrison Henry Cooke Richards
Ira Adelbert Eder
Douglas Blakeshaw Netherwood
Lewis Hyde Brereton
Edward Lincoln Hoffman
Hugh Johnston Kneer
Eugene Alexander Lohman
Follett Bradley
Shepler Ward FitzGerald
Leslie MacDill
Lawrence Sprague Churchill
Clarence Leonard Tinker
Martin Francis Scanlon
Byron Quinby Jones
Davenport Johnson
Walter Glenn Kilner
Henry William Harms
Millard Fillmore Harmon, Jr.
Fred Hughes Coleman
John Chilton McDonnell
Roy Messick Jones
Percy Edgar Van Nostrand
John Bernard Brooks
Harold Aron Strauss
Junius Wallace Jones
Clinton Warden Russell
George Edward Lovell, Jr.
Carlyle Hilton Wash
Howard Calhoun Davidson
Harvey Steele Burwell

Captains to be Majors

Thomas Watson Haste
Morris Berran
Walter Bender
Albert Michael Guidera
James Francis Doherty
Lynwood Benjamin Jacobs
Frank Wilbur Wright
Edgar Peter Sorensen
Robert Olds
Ross Gordon Hoyt
William Bentley Mayer
Richard Henry Bellard
Ralph Hudson Wooten
Harold Mark McClelland
Volcott Paige Hayes
Edmund Walton Hill
Walter Francis Kraus
William Eugene Farthing
Orlo Harry Quinn
Lester Thomas Miller
Arthur Bee McDaniel
Francis Murray Brady
Arthur Edmund Easterbrook
Warner Beardsley Gates
Ira Clarence Eaker
Romeyn Beck Hough, Jr.
Frank Hitch Pritchard
Idwal Hubert Edwards
George Stewart Warren
Early Edward Walters Duncan
William Downing Wheeler
Armin Ferdinand Herold
Charles Addison Pursley
George Luke Usher
Joseph Henry Davidson
Paul Jones Mathis
Otto Gresham Trunk
Gilbert Taylor Collar
Benjamin Franklin Giles
Edward Crews Black
Robert Kauch

First Lieuts. to be Captains

Augustine Francis Shea
Nathan Ferragut Twining
Ralph Francis Steadley
Russell Lowell Williamson

Adolphus Rankin McConnell
Kenneth Newton Walker
Oscar Leslie Rogers
Samuel Perham Mills
Edgar Theodore Selzer
Charles Harold Howard
Edward Alton Hillery
Everett Sanford Davis
Donald Reuben Goodrich
Harold Brand
Julian Buckner Haddon
Haynie McCormick
Cornelius Emmett O'Connor
Park Holland
Donald Frank Stace
Thomas Dresser White
Lawrence Joseph Carr
Harry Clark Wisehart
John Ferral McBlain
Harold Thurston McCormick
John Lamont Davidson
Hugo Peoples Rush
Ernest Starkey Moon
Arnold Hoyer Pich
Charles Dawson McAllister
James Thorburn Cumberpatch
Don Waters Mayhue
Edmund Clarence Langnead
David William Goodrich
James Milliken Bevans
Paul Hanes Kermer
Donald Boyer Phillips
Cecil Elmore Archer
Louis Meline Merrick
Dudley Warren Watkins
Lyman Perley Whitten
Ray Henry Clark
Homer Wilbur Ferguson
Donald Wallace Norwood
Robert William Calvert Wimsatt
Donald Fowler Fritch
John Sharpe Griffith
Edmund Clayton Lynch
Alfred August Kessler, Jr.
Mervin Eugene Gross
Benjamin Wiley Chidlaw
Orval Ray Cook
James Wrathall Spry
Robert Wilkins Douglass, Jr.
Oscar Louis Beal
Hilbert Milton Wittkop
Townsend Griffiss
Lee Henry Dawson
Milton John Smith
James Frederick Phillips
Raymond Edward Culbertson
Ralph Adel Snively
Robert Bayd Williams
John Wesley Warren
Patrick Weston Timberlake
Clyde Kenneth Rich
Laurence Carbee Craigie
Charles White Lawrence
Wallace Evan Whitson
Russell J. Minty
James Francis Joseph Early
Alden Rudyard Crawford
(Continued on page 15).

* Brig. General and Assistant Chief of the Air Corps.

N I G H T A E R I A L A T T A C K S

By the Wheeler Field Correspondent

For a number of years it has been accepted as sound Air Corps doctrine that combat aviation can and will attack terrestrial targets at night as well as in the daytime. When the target is illuminated by a full moon, it is reasonable to expect that fair results may be obtained with present equipment, but there is little proof available to substantiate even this conservative statement. To secure some data on this important Air Corps problem, the 18th Pursuit Group at Wheeler Field recently conducted a series of training exercises involving the use of live ammunition against floating targets at night.

The 18th Pursuit Group consists of the 6th and 19th Pursuit Squadrons, the 26th Attack Squadron and the 75th Service Squadron. Its tactical flying equipment consists of P-12 and A-3 airplanes.

One of the missions of the 18th Group in an emergency might well be to repel the landing of hostile forces approaching Oahu in small boats. This mission would probably require night attacks against such boats by both Attack and Pursuit aviation, both of which have sufficient fire power to accomplish the mission, if the available fire power could be effectively applied.

Night flying conditions on Oahu present a special problem unlike those to be found anywhere on the mainland. While good weather generally prevails, the north east trade winds pile the clouds on the east side of the mountain ranges which fringe both the east and west shore. These clouds usually run up to six thousand feet and not infrequently pile up to twelve or fifteen thousand feet high. The cooling of the trade wind results in condensation and it is raining somewhere on Oahu all the time nearly every night. The thick cloud banks, the wooded mountains and the open sea surrounding the island on all sides make the majority of nights very black, indeed. The clouds, mountains and rain are a great asset to the defender who understands and uses them and a handicap to any attacker.

Major Clayton Bissell, Group Operations Officer, arranged with the Hawaiian Division for the use of the Hawaiian Division machine gun range lying over the ocean west of Waianae for a series of tests. Searchlights were procured to mark by horizontal beams the limits of the danger areas to small fishing boats from machine gun fire and to illuminate any such boats that might enter the danger zone. A crash boat was moved to Waianae to stand by in case of forced landing in the water.

A frame target six feet by eight feet

by four feet was constructed on a float and covered with target cloth. This was towed to a position about one thousand feet off shore and anchored. During the tests sea conditions were average to rough, which made the target as active as a small boat would have been and presented a target constantly moving up and down.

The nights selected for the test were moonless, partly cloudy and very dark. It was desired to secure information under the hardest conditions for operations. There was a fresh off-shore wind blowing during all tests which required airplanes to fire while flying down wind, reduced time for effective fire but was a normal condition for the locality and the condition generally to be expected along a shore line at night. Its great advantage was that it carried parachute flares out to sea and removed the fire hazard.

All attacks were made by attack aviation firing at ranges from 700 to 300 yards. Approaches were made in a slight glide. In horizontal approaches close to the water high waves hide the target and reflect light. Nothing is to be gained by flying under fifty feet above the water at night. Tracer ammunition was not used. Although the effectiveness of tracer ammunition in quickly bringing guns upon the target was fully appreciated, it was not essential, as the splashes will secure the same results.

The flares available and used for this exercise were 35 type M-8 flares from Lot No. 2027-1, which were condemned by the Chief of Ordnance and withdrawn from use for flights involving emergency landings but authorized for issue and use in flights not involving emergency night landings. Incidentally, each officer in the Pursuit squadrons released one of these flares to gain experience in releasing flares and illuminating targets for attack aviation. This proved to be valuable training, and each flare released functioned well, though there was considerable variation in the intensity of the light and the time of illumination.

After the first exercise all flares were dropped approximately over the shore line (1000 yards inshore from the target) and were carried by the wind toward the target. On one exercise in which ten flares were used the flares were dropped one for orientation and to determine exact wind direction, and velocity and then three groups of three flares each. Each group of three was dropped in approximately a straight line 90% to the line of approach - one flare of each group of three over the

line of approach and one on each side of the line of approach. The proper altitude for dropping will always depend on the velocity of the wind.

The target once illuminated should be kept under constant illumination. Before one group of flares burn out, another should have illuminated the target. If the flares go out entirely, the target, shore line and everything else is momentarily lost in the blackness that follows the intense light. After flares have been used for some minutes and then go out entirely the human eye is much less useful for several seconds than it was before any flares were dropped. All pilots were unanimous in this conclusion.

Immediately following the exercise just described, the attack rearmed and another Pursuit squadron took up the illumination for the second exercise. For this exercise fifteen flares were dropped; first, one orientation flare and then seven groups of two each. Groups of two were dropped approximately simultaneously, one on each side of the line of approach and on a line 90° to line of approach. In this exercise the target was kept constantly illuminated.

The first flare in this exercise was dropped at 9:04 P.M., and the other groups released at 9:06, 9:09, 9:12, 9:15, 9:18, 9:20 and 9:22 P.M., kept the target illuminated until 9:26 P.M., or a period of 22 minutes. In some instances groups of flares were released a little too soon and maximum time of illumination was not procured from all groups of flares. More experience in illuminating targets is desirable before drawing definite conclusions, but our exercises indicate that an 13-airplane squadron carrying two flares per plane can keep an area target one thousand yards square constantly illuminated for a period of one hour. Flares should be released on a previously determined time schedule, so that attack may plan approaches when the target will be most effectively illuminated.

After attack airplanes fell into column, it was essential for each airplane to turn sharply to the right or left after passing the target to avoid the many bullets which ricochet erratically from the turbulent water, and at this moment the pilots have difficulty picking up any objects against the black background for many seconds after their eyes leave the illuminated target.

All pilots displayed keen interest and enthusiasm in the problem, and all squadrons have requested that more training problems of this nature be conducted.

A second series of exercises was conducted to test the effectiveness of fire at night when the target was illuminated by searchlights from shore. The target and its location was substantially the

the same as in the previous exercises with flare illumination. Attack was handled in the manner previously described. Pursuit did not participate.

The beams from two shore-based searchlights were trained to intersect at the target. Horizontal beams from other shore based searchlights defined the danger area for small fishing boats. Searchlights definitely will illuminate one particular target better than the flares but are less effective for area illumination. They would be of limited value because they offer an excellent target for hostile air or ground fire, and would quickly be shot out; they are inflexible; too many searchlights would be required to cover a large area and a communications system for coordination with aircraft would be essential. In addition, the intense glare of the searchlight and the reflection of light from the airplane surfaces increases the difficulty of sighting and maneuvering before, during and after the attack. Wherever shore-based searchlights are essential and are provided for illumination for beach guns, aviation should devise proper joint tactics to employ this type of illumination, but it is believed the Air Corps should devise satisfactory illumination for night aerial operations entirely independent of shore-based searchlights.

The 18th Group will conduct another night firing exercise against waterborne targets in the near future, selecting a bright clear moonlight night and using no illumination except moonlight in order to secure information on what results may be expected by moonlight.

The 18th Group would welcome the constructive comments and experience of other Air Corps organizations who have conducted night firing or bombing exercises with various types of illumination.

---oOo---

INSTRUMENT FLYING BY WASHINGTON N.G. AIRMEN

Instrument flying and perfection in the use of the new SCR-AA-185 radio sets are the chief operations with officers of the 41st Division Aviation, Washington National Guard, Felts Field, Spokane, Washington.

A schedule for instrument flying has been prepared by Major Robin A. Day, Commanding-Instructor, whereby all pilots will remain under the hood until they feel capable of passing an examination for their instrument flying certificate.

Observers are being drilled in all uses of the new radio equipment, particularly in the reading of the charts relating to wave length as effecting various sets of coils, and dial settings.

Pilot and observer teams are being schooled in their united duties, and this training will continue until a satisfactory degree of efficiency has been reached.

Kilner
JNA June 12/1915

B I O G R A P H I E S

LIEUT.-COLONEL WALTER G. KILNER

Lieut.-Colonel Walter G. Kilner, Air Corps, veteran Army pilot, was born at Shelby, New York, July 8, 1888. He graduated from the United States Military Academy in June, 1912, and, after two years' service as a second lieutenant with the 3rd Infantry, he was detailed as a student at the Signal Corps Aviation School, San Diego, Calif. Upon the completion of his flying training, he passed the required tests for the rating of Junior Military Aviator. While stationed at the San Diego Flying School, he served as assistant to the Officer in Charge of Training. He was a member of the 1st Aero Squadron, and during the time this organization was attached to the Punitive Expedition into Mexico, under General Pershing, he performed reconnaissance missions in that country.

Shortly following America's entry into the World War, Col. Kilner was placed in charge of the Signal Corps Aviation School at Mineola, L.I., New York. On November 1, 1917, he sailed for duty overseas, and from the 26th of that month until May 14, 1918, he was on duty as Commanding Officer of the Third Aviation Instruction Center at Issoudun, France. When he assumed this duty, conditions were by no means satisfactory. Exhibiting a thorough grasp of the situation, working intelligently and untiringly, he succeeded in systematizing the training of American students in France, thereby making it possible to conduct same in an effective manner.

From May 15, 1918, Col. Kilner was on duty at Headquarters, Air Service, Service of Supply, until his return to the United States when, on March 13, 1919, he was assigned to duty in the Office of the Director of Air Service as a member of the Advisory Board. In addition to this duty, he was Chief of the Operations Division, Training and Operations Group, from December 17, 1920, until September 28, 1921, when he was relieved from the Advisory Board. He served as Assistant Chief of the Training and War Plans Division from November 7, 1921, until he took up his duties as a student at the Air Service Engineering School at McCook Field, Dayton, Ohio, August 28, 1922. The following year, in December, he returned to the Office of the Chief of Air Service as Assistant Chief of the Training and War Plans Division and Chief of the War Plans Section. He served in this dual capacity until July, 1924, except for a period of temporary duty at Bolling Field, D.C., from February 15 to May 9, 1924, when he was assigned as Executive,

Office of the Chief of Air Service.

Following a two-year tour of duty in the Philippines, where he served as Commanding Officer of Nichols Field and of the 4th Composite Group, and as Acting Air Officer of the Philippine Department, Col. Kilner returned to duty as Executive, Office of the Chief of the Air Corps, serving in this capacity from May 22, 1930, to May 31, 1931. He was then assigned as Executive in the Office of the Assistant Secretary of War for Air, the Hon. F. Trubee Davison. This duty terminated August 17, 1933, and since that time he has been a student officer, graduating from the Industrial College in 1934; from the Air Corps Technical School, Maxwell Field, Ala., last June, and now pursuing the course at the Army War College.

During and subsequent to the World War, Col. Kilner held the temporary rank of Lieut.-Colonel from October 27, 1917, to September 14, 1918, and that of Colonel from that date until March 15, 1920, when he reverted to his regular rank of Major.

In addition to the Distinguished Service Medal, awarded him for the exceptional performance of his duties with the A.E.F. in France, Col. Kilner was decorated with the Order of St. Michael and St. George by the British Government, and the French Government made him an Officer of the Legion of Honor.

---c00---

LIEUT.-COLONEL IRA A. RADER

A native of sunny California, Lieut.-Colonel Ira A. Rader, Air Corps, was born in Mayten on June 30, 1887. He was a student at the University of California when he received an appointment as a cadet at the United States Military Academy. Upon his graduation in June, 1911, he was commissioned a 2nd Lieutenant and assigned to the 19th Infantry, serving with this regiment until April 27, 1912; with the 24th Infantry to September 1, 1914, and with the 23rd Infantry until he was detailed to the Aviation Section, Signal Corps, as a flying student. His first service as a commissioned officer was in the Philippines. Upon completing the course at the Signal Corps Aviation School at San Diego, Calif., he passed the required tests for the rating of Junior Military Aviator, and received this rating July 14, 1915.

Assigned to duty with the 1st Aero Squadron, Col. Rader served with this organization at Columbus, New Mexico, and during the time it was attached to the Punitive Expedition into Mexico where,

as pilot as well as observer, he performed many reconnaissance missions.

When the United States entered the World War, Col. Rader was assigned as Aeronautical Officer, Central Department, Chicago, Ill., where he was busily engaged examining and passing upon applicants for flying training.

Ordered to duty overseas, he joined the A.E.F. in France in November, 1917, and was placed in command of the 7th Aviation Instruction Center, the first American bombing school in the war zone. Col. Rader remained on duty in France during the greater part of the heaviest fighting and was present at the front as a member of the First Bombardment Group during the St. Mihiel and Argonne Offensives.

In October, 1918, he was relieved from duty overseas and returned to the United States to take over the command of the bombing school at Ellington Field, Houston, Texas. He served in this capacity to February 7, 1919, and as Executive Officer at Ellington Field to April 19, 1919, when he was transferred to Americus, Ga., and assigned to the command of Souther Field and the Aviation General Supply Depot. In November, 1919, he was transferred to McCook Field, Dayton, Ohio, where he attended the Air Service Engineering School and was also on duty as Assistant to the Commanding Officer of McCook Field.

From October, 1920, to August, 1922, Col. Rader was on duty as Air Officer of the 7th Corps Area. He was then transferred to duty in Washington as Chief of the Information Division, Office of the Chief of Air Service. In February, 1925, he was assigned as student at the Army Industrial College and, following his graduation, he was, for brief periods, on duty in the Training and War Plans Division, Office of the Chief of Air Service, and later in the Supply Division as Chief of the Property Requirements Section, until September, 1926, when he was assigned as student at the Air Corps Tactical School at Langley Field, Va.

During the years 1925 and 1926, Col. Rader served as Executive Officer of the Annual Machine Gun and Bombing Matches at Langley Field, Va., and was highly commended for the highly efficient performance of his duties.

After his graduation from the Air Corps Tactical School, he completed the course at the General Staff School at Fort Leavenworth, Kansas, and in September, 1928, was transferred to Fort Benning, Ga., and assigned to duty as Instructor at the Infantry School.

Since July 1, 1932, Col. Rader has been serving on the staff of the Commanding General, 4th Corps Area, as Air Officer.

37th ATTACK SQUADRON MANEUVERS WITH PURSUIT

The 37th Attack Squadron, Langley Field, Va., recently underwent a metamorphosis and became affiliated, officers, men and ships, with the full strength Pursuit Group, temporarily organized for maneuvers held at Virginia Beach, Va., for a period of five days in August. The 35th and 36th Pursuit Squadrons were brought up to the necessary strength of 28 planes each by the addition of ships from the 33rd Pursuit, 37th Attack, and a flight of O-1G's from Mitchel Field, N.Y. Thus the Squadron lost its identity for a short time, and, says the News Letter Correspondent, "some of the pilots are reported to have lost their tempers also in trying to stay in string formation behind the P-26's and P-12's."

---oOo---

AUTOMATIC NAVIGATION

Automatic navigation became a reality at Wright Field, Dayton, Ohio, on August 28th, after months of tests with laboratory devices for interlocking the Sperry Gyro pilot and the Air Corps radio compass.

Developed by the Equipment Branch of the Materiel Division, the device was installed in a Martin Type B-12A airplane, and flights were made on local radio stations for several days. After the gyro pilot is engaged, the radio compass tuned to a selected radio transmitter, the airplane proceeds to a destination irrespective of its heading at the time of interlocking the gyro pilot and radio compass. On reaching the radio transmitter at destination the airplane circles, each time returning to the location of radio station until the device is disengaged.

The Martin B-12A was flown automatically to New York City on September 3rd, where a similar experimental device constructed by the Sperry Gyroscope Company was installed and tested in flights there and on the return flight to Wright Field.

---oOo---

EXCHANGE OF INSTRUMENT FLYING PLANES

Two BT-2 Basic Training airplanes were recently flown from Selfridge Field, Mich., to the San Antonio Air Depot, Duncan Field, Texas, for the purpose of exchanging them for PT-3 instrument flying planes and thereby enabling the BT-2's to be released to the Air Corps Training Center.

Major Harlan T. McCormick and Captain Captain Earle E. Partridge were the pilots on the aerial journey to San Antonio, and they were accompanied by 1st Lieut. James R. Anderson, Ordnance Department, and Flying Cadet David C. Barrow, Jr., as passengers.

First Lieutenants to Captain
(Continued from Page 10).

Thomas Merritt Lowe
David Myron Schlatter
Charles Trovilla Myers
Leslie Page Holcomb
Wilfrid Henry Hardy
Joseph Smith
Joseph Harold Hicks
Robert Chaffee Oliver
John Maurice Weikert
William Lawrence Scott, Jr.
John George Salsman
James Michael Fitzmaurice
Hoyt Sanford Vandenberg
Stewart Warren Towle, Jr.
Walter Cornelius White
Glen Clifford Jamison
Carl Brown McDaniel
Herbert Kenneth Baisley
John Kraybill Nissley
Charles Goodwin Pearcy
Archibald Yarborough Smith
Herbert William Anderson
Albert Fox Glenn
Earle Everard Partridge
David Jerome Ellinger
Fred Arley Ingalls
Cecil Ernest Henry
Uzal Girard Ent
Joe L. Loutzenheiser
Richard Emmel Nugent
John Phillips Kirkendall
Robert Roy Solway, Jr.
John Gilbert Moore
Luther Stevens Smith
Robert Wells Harper
Howard McMath Turner
Leonard Henry Rodieck
George Hinkle Steel
Edward Higgins White
William Olmstead Eareckson
Richard Weigand Gibson
John Reynolds Hawkins
Ralph Emanuel Fisher
James Somers Stowell
Arthur LeRoy Bump, Jr.
Dewas Thurlow Crow
Cornelius Walter Cousland
Carl Joseph Crane
Howard Eugene Engler
William Donald Old
Elmer Theodore Rundquist
David Marshall Ramsay
Harold George Peterson
George Francis Schulgen
Otto Paul Weyland
Reginald Roan Gillespie
Kirtley Jameson Gregg
George Aldridge Whatley
Sheldon Brightwell Edwards
Clarence Steven Thorpe
Howard Hunt Couch
Wilfred Joseph Paul
Glenn L. Davasher
William Ludlow Ritchie
John Henry Dulligan
Walter Grant Bryte, Jr.
Russell Edward Randall

Charles Pearre Cabell
Clifford Palmer Bradley
Joseph Cyril Augustin Denniston
John Halliday McCormick
Earl Walter Barnes
Charles Henry Caldwell
Edgar Turner Noyes
James Keller De Armond
Walter Llewellyn Wheeler
Norme D. Frost
Linus Dodge Frederick
James Gordon Pratt
Milton Miles Murphy
Lee Quintus Wasser
Benjamin Thomas Starkey
Frank Gilmore Irvin
George Vernon Holloman
Glenn Oscar Barcus

Second Lieuts. to First Lieut.

Anthony Quintus Mustoe
Douglas Thompson Mitchell
Robert Kinnaird Giovannoli
Edwin William Rawlings
Julius Kahn Lacey
Theodore Bernard Anderson
George Frank McGuire
Oliver Stanton Picher
Dyke Francis Meyer
Hugh Francis McCaffery
Minthorne Woolsey Reed
Morley Frederick Slaght
Roy Dale Butler
Berkeley Everett Nelson
Archibald Johnston Hanna
Richard August Grussendorf
John Rielt Ives
Frederick Earl Calhoun
Carl Ralph Feldmann
Ralph Powell Swofford, Jr.
George Fletcher Schlatter
Howard Munroe McCoy
Charles William Haas
Clark Neil Piper
Aubrey Kenneth Dodson
Mark Edward Bradley, Jr.
Douglas Mitchell Kilpatrick, Jr.
Wiley Duncan Ganey
Thetus Cayce Odom
Harry Ollingsworth Geoffrey
Anthony Eugene Curcio
Morris John Lee
Marvin Lewis Harding
Birrell Walsh
David Hodge Baker
James Sylvester Sutton
Richard Churchill Hutchinson
Edwin Sanders Perrin
Neal Edwin Ausman
Troup Miller, Jr.
William Dole Eckert
Lauris Norstad
Millard Lewis
Othel Rochelle Deering
John Chelsey Kilborn
Carl Amandus Brandt
Richard Shafle Freeman
Harold Lester Smith

Norman Ray Burnett
Richard Joseph O'Keefe
Joseph Arthur Miller
Kurt Martin Landon
Gerry Leonard Mason
Hubern Paul Dellinger
Daniel Anderson Cooper
Sory Smith
Paul Wm. Blanchard, Jr.
Elwin Freestone Maughan
Daniel F. Callahan, Jr.
Marcellus Duffy
Robert Alan Stunkard
Gordon Aylesworth Blake
Joseph Francis Carroll
A. J. McVea
Julian Merritt Chappell
Donald Norton Yates
Hoyt Daniel Williams
Paul Gordon Miller
William John Bell
Ernest Moore
Royden Eugene Beebe, Jr.
Earle Wm. Hockenberry
John Edwin Barr
Louis Augustine Guenther
Milton Wylie Arnold
David Northrup Motherwell
Millard Chester Young
Henry Keppler Mooney
Robert Merrill Lee
Robert Freeman Fulton
Dean Coldwell Strother
George Frederick Hartman
Carl Wilbert Carlmark
Richard Hungerford Wise
Charles Francis Densford
John Robert Skeldon
Jacob Edward Smart
Lester LeR.H. Kunish
Robert E. L. Eaton
Carl Fillmore Damberg
Wendell W. Bowman
Joseph Buford Zimmerman
Hilbert Fred Muentner
John Autrey Feagin
Raymond Taylor Lester
John Clarence Gordon
Charles Bowman Dougher
David Wm. Hutchison
Gerald Evan Williams
Edward J. Timberlake, Jr.
John Tazewell Helms
Russell Hunter Griffith
Stanley Ronald Stewart
James H. Cunningham, Jr.
Leo Peter Dahl
Torgils Grinkel Wold
John Bevier Ackerman
Benjamin Jepson Webster
James F. Thompson, Jr.
Loren Boyd Hillsinger
John Paul McConnell
Joe William Kelly
John Morgan Price
John Joseph Hutchison
Daniel Stone Campbell
Kenneth Burton Hobson

Second Lieutenants to First Lieutenant

John Reynolds Sutherland
Donald Linwood Hardy
Charles Albert Clark, Jr.
Harvey Porter Huglin
George Dowery Campbell, Jr.
Charles Hardin Anderson
Byram Arnold Bunch
Hunter Harris, Jr.
David Hamilton Kennedy
Nicholas Earnest Powel
Andrew Meulenberg
Edwin Guldlin Simenson
Sam Houston Wiseman
William Gordon Beard
Robert Haynes Terrill
Thomas Connell Darcy
Clifford Harcourt Rees
Arnold Leon Schroeder
Eugene Porter Mussett
Edward Willis Suarez
Paul Delmont Burker, Jr.
Robert Broussard Landry
Frank Greenleaf Jamison
Robert Lynn Carver
Romulus Wright Puryear
William Madison Garland
Thomas Charles Morgan
James Walter Curr
Robert Lee Scott, Jr.

---oOo---

MAINTENANCE PROJECTS AT SELFRIDGE FIELD

An allotment of \$79,000 was recently received by the Post Quartermaster, Selfridge Field, Mich., for repair and maintenance projects. Plans include \$39,000 for extension of the heating and electrical system, including new submarine primary cable to replace the overhead lines, a new primary house and simplification of the present system; and \$14,000 for the maintenance of buildings, grounds and utilities, including interior and exterior painting of quarters and barracks, modification of the officers' mess and bachelor officers' garages, improvement of grounds and repair of roads. Allowance for the purchase of material and labor from relief rolls is included in each project.

---oOo---

AWARD OF CONTRACT FOR TRANSPORT PLANES

The Assistant Secretary of War, Hon. Harry H. Woodring, has just announced the award for the procurement of 18 two-engine transport planes and spare parts which are the equivalent of two additional planes, to the Douglas Aircraft Company, Inc., of Santa Monica, Calif. The total amount of this contract is \$1,235,500.

The circular proposal for this type of airplane was issued to the industry on August 24, 1934, with the opening date May 24, 1935. In accordance with

the normal procedure, the airplanes on which the bids were received were evaluated by means of exhaustive study and actual flight tests, conducted by a board of officers. The tests were conducted at Wright Field, Dayton, Ohio.

---oOo---

PLANES FERRIED FROM BOEING FACTORY

A C-4A Transport plane from Wright Field, which was loaned to Selfridge Field, was flown on September 6th to the Boeing Aircraft Factory at Seattle, Wash., by Major Fred C. Nelson, Air Corps, with Master Sergeant Julius A. Kolb, 56th Service Squadron, as crew chief, and the following pilots as passengers: Captains Leo H. Dawson, Robert C. Oliver, Lee Q. Wasser, Paul M. Jacobs, Rudolph Fink, 1st Lieuts. Jarred V. Crabb, William J. Bell, David W. Hutchison, 2nd Lieuts. Lester S. Harris and Harold L. Neely.

The ferry pilots secured at the Boeing plant ten of the modified P-26A Pursuit planes and returned to their home station via Great Falls, Montana; St. Paul, Minn. and Chicago.

Lieut. Harris was forced down at Bismarck, North Dakota, on Friday, Sept. 13th, due to a failure of the blower section. An engine was sent from Patterson Field, Fairfield, Ohio, by air, and three Selfridge Field mechanics were ferried, with the engine, to Bismarck to make the necessary installation.

Another flight in a Transport plane, the C-4A, was made to the Boeing factory on September 16th, for the purpose of securing three additional modified P-26A planes and ferrying them to Selfridge Field. Captain Ernest K. Warburton, Air Corps, piloted the C-4A, with Sergeant Harry T. Brock, 56th Service Squadron, as crew chief. The pilots who made this journey as passengers were Captain Harry H. Mills, Instructor of the Michigan National Guard Air Corps at the Wayne County Airport, Detroit, Mich.; Captain Omer C. Niergarth, Air Corps representative of the Procurement Office in Detroit, and 2nd Lieut. Arnold T. Johnson, of Selfridge Field.

---oOo---

The monthly Control Area supply and engineering conference at the San Antonio Air Depot, Duncan Field, Texas, was held on September 10th, and was attended by nineteen Air Corps officers representing various stations in this Area.

During the month of August, the San Antonio Air Depot overhauled a total of 28 airplanes and 68 engines, and repaired 29 airplanes and 17 engines.

---oOo---

First Lieut. John C. Kilborn, Air Corps, was detailed senior instructor of the West Point Preparatory School at Camp Bullis, Texas.

V-6867, A.C.

MITCHEL TROPHY RACE IN MID-OCTOBER

According to the Selfridge Field Correspondent, the date for the running of the Mitchel Trophy Race has been set for October 19th, and extensive plans are being made for this annual competition by the pilots of the First Pursuit Group.

The Race Committee and the Mt. Clemens Board of Commerce are coordinating to make this a real "visitors' day" at Selfridge Field. A number of distinguished people have been invited to witness the exhibition. The proceeds from the air show will go to the Army Relief Society and charitable organizations of Mt. Clemens.

The tentative program for the day is as follows:

10:00 A.M. - 1:00 P.M. - Arrival of visiting aircraft. Acrobatic competition for the Mt. Clemens Cadet Trophy (Open for cadets of the 1st Pursuit Group only).

12:00 Noon - 12:30 P.M. - Formation flying - Naval Reserve Unit from Grosse Ile Naval Base.

12:00 Noon - 1:00 P.M. - Formation flying - 107th Observation Squadron, Michigan National Guard.

1:05 P.M. - 1:20 P.M. - Open formation - 6 P-26A's, 94th Pursuit Squadron.

1:25 P.M. - 1:40 P.M. - "First Solo" flight by a student.

1:40 P.M. - 1:50 P.M. - Balloon bursting, 17th Pursuit Squadron.

1:50 P.M. - 2:10 P.M. Junior Birdmen Trophy Speed Dash.

2:10 P.M. - 2:25 P.M. - Bombing, 6 P-26A's, 27th Pursuit Squadron.

2:25 P.M. - 2:40 P.M. - Acrobatics, P-26A, Captain Yantis H. Taylor.

2:40 P.M. - 3:00 P.M. - Formation flying, 3rd Attack Group, Barksdale Field, La.

3:00 P.M. - 3:35 P.M. - Curtiss-Wright Trophy Race - 6 Curtiss P-6's, 8th Pursuit Group, Langley Field, Va.

3:35 P.M. - 3:50 P.M. - Mass parachute jump.

3:50 P.M. - 4:15 P.M. - Formation flying, Demonstration Squadron under Major George P. Tourtellot - 18 P-26's.

4:15 P.M. - Mitchel Trophy Race.

The Mitchel Trophy was donated by former General William Mitchel, of the Air Service, in memory of John L. Mitchell, his brother, who was killed in action during the World War. The contest for this Trophy is a strictly military event for pilots of the First Pursuit Group of the Army Air Corps, and the winner retains it in his possession until the victor of the next year's contest is announced.

Thus far, ten contests have been staged, the first in 1922, during the Air Races held at Detroit, Mich., when the winner, Lieut. D.F. Stace, averaged a speed of 148 miles per hour. There

were six competitors in this event, all piloting the MB-3 airplane.

The following year, during the International Air Races at St. Louis, Mo., the late Captain Burt F. Skeel carried off the honors, averaging a speed of 156 miles per hour.

Up to last year, the high speed record for this annual classic was held by the late Lieut. Cyrus Bettis, who in 1924, during the International Air Races at Dayton, Ohio, averaged a speed of 175.43 miles per hour.

In 1925, Lieut. Thomas K. Matthews won the Trophy with an average speed of 161.5 miles per hour. The race was held at Mitchel Field, N.Y., and the winner piloted a Curtiss PW-8 Pursuit plane.

In 1926, when the International Races were held at Philadelphia, Pa., Lieut. L.G. Ellicott, in a Curtiss P-1 Pursuit plane, averaged 160.45 miles per hour, and he held the Trophy for one year, relinquishing it to the late 1st Lieut. Irvin A. Woodring, who on October 12, 1927, at Fairfield, Ohio, when the Mitchel Trophy Race was one of the features incident to the dedication of Wright Field, averaged a speed of 158.968 miles per hour. Fifteen P-1 Pursuit planes entered the race, and there was but one minute and 23 seconds difference in the time of the first and the last plane.

Lieut. B.H. Lawson won the 1928 contest, which was held during the International Air Races at Los Angeles, Calif., his average speed being 154.743 miles per hour.

At Cleveland, Ohio, the locale of the International Air Races that year, Lieut. Paul B. Wurtsmith was the winner of the Trophy, averaging 152.17 miles per hour.

In 1930, the Mitchel Trophy Race was held at the home station of the First Pursuit Group - Selfridge Field - and 2nd Lieut. Louis A. Vaupre, winner of the contest, averaged 146.7 miles per hour.

No contest was held during the years 1931, 1932 and 1933, but last Fall, when the race was again held at Selfridge Field, Captain Fred C. Nelson eclipsed all speed records previously attained in contests for this Trophy. As a matter of fact, this was the case with all of the participants in the 1934 event. Captain Nelson averaged a speed of 216.832 miles per hour.

---oOo---

Two retired Air Corps noncommissioned officers passed away recently - Staff Sgt. Harry Kamoski, who was retired August 31st at Kelly Field, Texas, where he had been stationed for 12 years, and Sergeant Arthur Eriksen, who was retired last February at Randolph Field for physical disability after 15 years' service. Sergeant Eriksen died at the Fitzsimons General Hospital. Funeral services for both of these noncommissioned officers were held in San Antonio.

TACTICAL SCHOOL LIBRARIAN RETIRES

After fifteen years of faithful service at her desk as Head Librarian of The Air Corps Tactical School, serving with the library since she herself started it at Langley Field, Va., early in 1921, Mrs. Geraldine V. Carlisle, civil service employee of the School, was officially retired from service on August 30, 1935.

When Mrs. Carlisle volunteered for the position as Head Librarian of the Tactical School Library, early in the spring of 1921, she was in the Air Corps Library in Washington and something of an authority on aeronautical writings. She was accepted for the position and journeyed to Langley Field, where the Tactical School, then the Field Officers' School, was located.

Upon assuming her duties, she found a stack of volumes on the floor of what had been selected as the library. From some 500 volumes and a jumble of documents, she planned and completed one of the most up-to-date and complete libraries in the Air Corps today, numbering some 10,000 documents and over 8,000 books.

One of her special pets is the \$500 set of Oxford Dictionaries, consisting of 20 volumes, and which took 52 years to complete. She instituted a practical and very complete military aeronautical library, which is used extensively by both the instructors and students at the Tactical School.

Mrs. Carlisle first became interested in government work while employed as Assistant Librarian of the University of Arizona. She applied for a government position as librarian at Washington and received her appointment in May, 1918. Since that time she has been associated entirely with the Air Corps. Three years were spent in Washington in the Air Corps Library and the remaining 15 years with the Tactical School.

Every student officer attending the School, as well as every instructor at the School since 1921, has known and liked Mrs. Carlisle. If she did not have the particular volume desired, or if the document was missing from the files, it was obtained in short order, and nothing but praise has been heard concerning the condition of the School Library.

Upon the transfer of the Tactical School from Langley Field, the Library was carefully packed away under the supervision of Mrs. Carlisle's critical eye, and every book and document was transferred to Maxwell Field and replaced in a newer and more modern setting.

Mrs. Carlisle took up residence at 520 S. Perry Street, and has lived there ever since. She is fairly well known and universally respected both in Montgomery and at Maxwell Field.

The School regrets that such an effi-

cient and valued employee was forced to retire due to civil service regulations, which make it mandatory that an employee retire from further service upon reaching the retirement age. Efforts to continue Mrs. Carlisle in the Library at Maxwell Field met with no success.

Questioned regarding her future plans, Mrs. Carlisle stated she has prospects for both New York City and Washington, D.C., but is as yet undecided about the matter. The very best wishes of the personnel of Maxwell Field, as well as many officers throughout the Air Corps who knew her, will accompany Mrs. Carlisle in her future undertakings.

---oOo---

RETIREMENT OF MRS. ADA DELANY COVENTRY

Exactly a month prior to the retirement of Mrs. Carlisle, Mrs. Ada Delany Coventry, Librarian of the Information Division, Office of the Chief of the Air Corps, and well known to Air Corps personnel, was retired from the government service due to the state of her health.

Mrs. Coventry was connected with the Information Division since February 17, 1919. Prior to entering the employ of the government as an index clerk in the Equipment Division of the Signal Corps, December 17, 1917, she had 13½ years of library experience. She was employed as Assistant Librarian of the Chatham Square Branch of the New York Public Library, and took special courses in her chosen line of work at Columbia University and the College of the City of New York.

Most of her service prior to her transfer to the Information Division was in the Bureau of Aircraft Production, where her knowledge of filing procedure proved of considerable value.

In building up the Library of the Information Division, Mrs. Coventry's experience proved invaluable, and the part she played in the collection and classification of books and documents on aeronautics, as well as gathering historical data and preparing statistics on the Army Air Corps since its inception, proved a great factor in enabling the Information Division adequately to take care of the demands made upon it and to answer the thousands of inquiries received from all sources for aeronautical information.

Mrs. Coventry has been in ill health for some time, and was advised to seek another climate. Efficient and ready at all times to render service, Mrs. Coventry's departure from the Information Division was greatly regretted, and those who know her sincerely hope that not ere long she will fully regain her health and again be able to take up the work she loves so well.

---oOo---

A steady stream of recruits, mostly high school graduates and natives of Michigan, has been pouring into Selfridge Field for the past several months.

started from Langley Field, Va., September 14, 1922, and terminated at Ross Field, Arcadia, Calif., nine days later. Stops enroute were made at Akron, Ohio; Scott Field, Ill.; Dallas, Texas; Brooks Field, Texas, and El Paso, Texas.

During the period between July and September, 1924, Major Hutchins took the course in rigid airship training at the Naval Air Station at Lakehurst, N.J., and shortly thereafter began heavier-than-air training, graduating from the Air Corps Primary Flying School at Brooks Field, Texas, in March, 1925, and from the Advanced Flying School at Kelly Field, Texas, in the following September. He is a member of the small contingent of Air Corps officers who hold four flying ratings, those of Airplane pilot, airplane observer, airship pilot and balloon observer.

After a tour of duty in the Panama Canal Department, Major Hutchins was transferred to duty in the Office of the Chief of the Air Corps, Washington, and assigned to the Buildings and Grounds Division, where he served four years. He was then assigned to duty at the locality on the Pacific Coast now definitely known as Hamilton Field. So well did he perform his duties at this field during its construction period that the Chief of the Air Corps selected him again to cooperate with the Quartermaster Corps in another big undertaking - the construction of the new Hickam Field.

---oOo---

NO ORDERS - NO EXTRA PAY FOR FLYING

A case which serves to emphasize the importance of issuing field Special Orders for enlisted men who are required to participate in regular and frequent aerial flights was recently brought to the attention of the Office of the Chief of the Air Corps. An Air Corps noncommissioned officer was a member of a flight of 4 commissioned officers and 7 enlisted men directed by an operations order to participate in squadron aviation training. During the course of this training this enlisted man sustained an injury in an airplane accident which incapacitated him for flying duty for a period of three months. He made a claim for increased pay for flying for these three months, but it was not allowed by the Comptroller General of the United States who, in a letter to the claimant, stated:

"It is not considered that you were required by orders of competent authority to participate in regular and frequent aerial flights."

Apparently no orders were issued at the field where claimant was stationed announcing that he was required to participate in regular and frequent aerial flights.

---oOo---

CHANGES IN STATION OF AIR CORPS OFFICERS

To Brooks Field, Tex.: Captain Douglas Johnston from Randolph Field, Texas.
To Randolph Field, Tex., for flying training: Captain Robert R. Selway, Jr., from Scott Field, Ill.

---oOo---

TEMPORARY PROMOTIONS OF AIR CORPS OFFICERS

To Major

Captain Milo McCune assigned as Engineer Officer, Station Complement, Barksdale Field, La. October 2, 1935.

Captain William R. Sweeley assigned as Commander, 41st Obs. Sqdn. Kelly Field, Oct. 2, '35.

Capt. Louie C. Mallory assigned Commander, 73d Attack Sqdn., March Field, October 2, 1935.

Capt. Hez McClellan assigned Commander, 14th Bomb. Squadron, Bolling Field, Sept. 30, 1935.

Capt. Horace S. Kenyon, Jr., assigned as Intelligence and Operations Officer, 12th Observation Group, Brooks Field, October 2, 1935.

Capt. Wm. N. Amis assigned Commander, 60th Service Sqdn., Barksdale Field, October 2, 1935.

Capt. Carlton F. Bond assigned as Intelligence and Operations Officer, 20th Pursuit Group, Barksdale Field, La., October 2, 1935.

Capt. Lester J. Maitland assigned Commander, 8th Attack Sqdn. Barksdale Field, Oct. 2, 1935.

To Captain

1st Lt. Daniel W. Jenkins assigned as Operations Officer, Station Complement, Barksdale Field, La., Sept. 28, 1935.

1st Lt. Charles Sommers assigned as Flight Commander, 41st Obs. Sqdn. Kelly Field, Oct. 2.

1st Lt. Thomas L. Bryan, Jr., assigned Flight Comdr. 40th Attack Sqdn. Kelly Field, Oct. 2.

1st Lt. Joseph W. Baylor assigned Flight Commander, 99th Bomb. Sqdn. Mitchel Field, Sept. 28.

1st Lt. Leon R. Brownfield assigned Flight Comdr. 15th Obs. Sqdn. Scott Field, Sept. 28.

1st Lt. John H. Davies assigned as Intelligence and Operations Officer, 13th Attack Squadron, Barksdale Field, October 2, 1935.

1st Lt. Samuel V. Stephenson assigned Flight Comdr. 48th Pursuit Sqdn. Chanute Field, Oct. 2.

To 1st Lieutenant

2nd Lt. Carl Swyter assigned as Signal Officer, Station Complement, March Field, Oct. 2.

---oOo---

Major Carl F. Spatz was promoted to Lieut.-Colonel, with rank from Sept. 16, 1935.

Captain Ross F. Cole was promoted to Major, with rank from September 1, 1935.

Captain Paul W. Wolf was placed on the retired list for disability incident to the service.

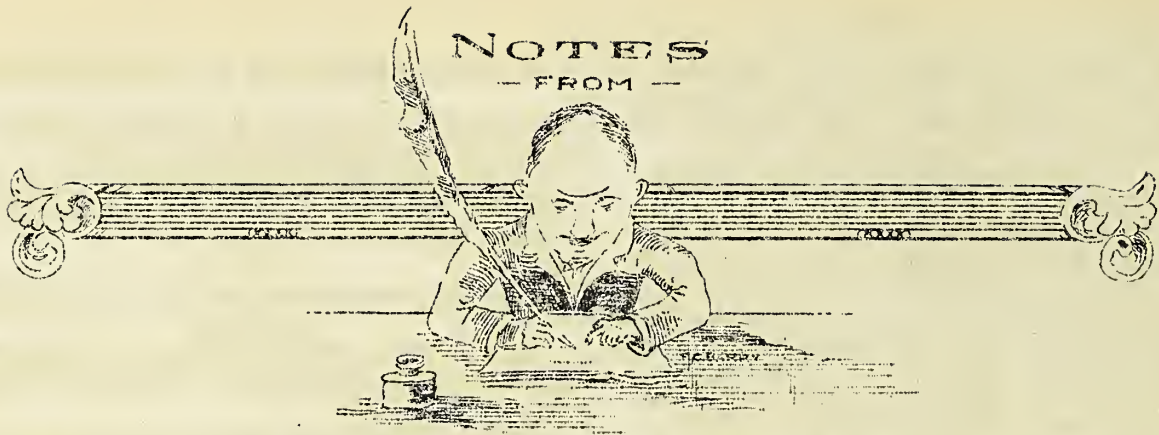
Major Lewis R.P. Reese was relieved from assignment, duty and temporary rank with 69th Service Squadron, Hamilton Field, Calif., and directed to proceed to his home to await retirement.

---oOo---

Technical Sergeant Tony J. Odens was placed on the retired list at Barksdale Field, La., on September 30, 1935.

NOTES

— FROM —



AIR CORPS FIELDS

Luke Field, T.H., Sept. 3, 1935.

72nd Bombardment Squadron: The Squadron returned to Luke Field from Bellows Field on August 23rd, completing their training in record time, firing all men authorized for record and all others on the anti-aircraft machine guns in a little over a week. Seventeen enlisted men qualified for the gun positions left vacant by men returning to the mainland. Nine officers also fired the course and qualified.

The Squadron Commander, Major John V. Hart, left on the REPUBLIC on September 3rd. We have all enjoyed working under him and hate to see him leave the Squadron. His next station will be Kelly Field, Texas.

Second Lieut. Kenneth P. Kreps joined the Squadron on Sept. 1st, as did 1st Sgt. William E. Gerton, who came from Barksdale Field.

4th Observation Squadron: Lieut. D.A. Cooper reported for duty with the 4th Observation Squadron from Monmouth, N.J., where he was a student during the past year at the Signal Corps Communications School. He relieved Lieut. Densford, who is leaving for Randolph Field, Texas, his new station. As communications officer of the Squadron, Lieut. Cooper will have the opportunity of applying his recently gained knowledge to the tactical operations thereof.

Sergeant George Woskow and Private Madison Brooks left the Squadron on the Transport REPUBLIC on Sept. 3rd, the former for his new station at Hamilton Field, Calif., and the latter for reassignment in the States.

23rd Bombardment Squadron: Lieut. David Crickette is very proud of his brand new runway now in use by the Squadron. As most of the 23rd Squadron spent a week, morning and afternoon, working on the project, his pride is shared by everybody.

On August 21st, the entire organization met at a Dutch Lunch in the Squadron Mess Hall to wish Aloha to the men leaving on the ST. MIEHE and the REPUBLIC. Lieut. Kennedy, Master Sergeant Hale, Sergeant Cox, Corporal Allen, Privates Gray, Jeffcoat, Bronczyk, Styvaert and Guthauser gave brief farewell

speeches when called on by Master Sgt. Brown, the toastmaster.

The Squadron mourns the passing of Private Hicks G. Wilson, of Mill Spring, N.C., who died Friday night, August 23rd, in an airplane crash at Luke Field. Private Wilson has been with the organization for about a year, and had gained everybody's friendship by his quiet and unassuming manner. In the same crash, Major Liggett, pilot, and Private Costello, acting crew chief, received minor burns and scratches, while Private James Monroe was badly burned and is now in Tripler General Hospital and is doing nicely.

A very pleasant trip was enjoyed by 21 members of the Squadron on Sunday, August 25th. The itinerary included Schofield Barracks, Haleiwa Beach, Nuuanu Pali, Honolulu and back to Luke Field. Lunch was furnished by the Squadron mess. The outing was so enjoyable that it is planned to send parties out every Sunday until all members of the Squadron have enjoyed such a tour.

The organization was scheduled to leave on September 4th for the annual Gunnery Camp at Waimanalo. Men have been so anxious to go that the First Sergeant is having difficulty assigning a detail to stay at Luke and maintain area.

Hawaiian Air Depot, Luke Field, T.H.

Overhaul production in the Engineering Section during the month of August comprised 8 aircraft and 14 engines.

A Douglas CA-4A was completed and turned over to the 5th Composite Group approximately one month ahead of schedule in order to have it available for the Congressional Party which arrived on the Transport REPUBLIC on August 28th. Considerable overtime work was involved in the effort to get this airplane out, and as a result the normal production for the month was exceeded by one airplane.

Mr. H.L. Cowan, Chief Clerk of the Engineering Department, returned from the Mainland on the Transport REPUBLIC, and during his trip spent one week at the Materiel Division at Wright Field and at the Fairfield Air Depot at Patterson Field. Mr. Cowan reports that the Materiel Division was extremely cooperative in furnishing him information and assistance, and that the results of his sojourn there were very satisfactory.

Technical Sergeant E.A. Witsch, who has been connected with the Depot Supply Department since

its organization, and who during the past several years has been assistant to the Chief Clerk, has been transferred to Depot Headquarters for duty as Assistant Chief Clerk. Sgt. Witsch has had 18 years' service with the Air Corps, having enlisted in the Balloon Section of the Signal Corps at the beginning of the War. He has had a vast amount of experience in Supply and Administrative work and represents the high type of enlisted men assigned to the Hawaiian Air Depot.

In addition to his duties as Assistant Supply Officer, Lieut. H.S. Bishop has been designated as Assistant Purchasing and Contracting Officer.

An invitation for bids for 663,000 gallons of aviation gasoline for use by the Air Corps was forwarded recently to dealers represented in the Hawaiian Territory.

Wheeler Field, T.H., September 3, 1935.

Lieut.-Colonel John C. McDonnell, who with Mrs. McDonnell arrived on the Transport REPUBLIC on August 28th, assumed command of Wheeler Field on Sept. 3rd. Col. McDonnell came to Hawaii from duty as a student in the last two-year course at the Command and General Staff School at Fort Leavenworth, Kansas.

With the departure of the REPUBLIC on Sept. 3rd, Lieut.-Colonel and Mrs. Ernest Clark left Wheeler Field after a long tour of duty here. Col. Clark has commanded Wheeler Field and the 18th Pursuit Group since June 23, 1931 - four years and two months - and during this period has completed the new field and moved the Group to the splendid new Wheeler Field.

The Clarks leave a host of friends behind who wish them "bon voyage" as they depart for their new station at Selfridge Field.

Also returning on the REPUBLIC were Major and Mrs. Early Duncan. Major Duncan served at different periods during his tour as Group Executive Officer, Operations Officer and Commanding Officer of the 6th Pursuit Squadron. He goes to duty at March Field. Captain Morris R. Nelson, who served as Operations Officer of the 6th Squadron for more than a year, returned with his family enroute to Barksdale Field. Captain George H. Sparhawk, who served as Group Communications Officer and Flight Commander, 19th Squadron, during the last two years, was enroute with his family to Maxwell Field, Ala.

Just visible under their load of leis were the smiling faces of Lieuts. Benjamin J. Webster and Daniel S. Campbell, who have "shipped over" for another year of foreign service and were returning to the mainland on leave, expecting to visit many Air Corps stations. We are not sure, but it looked as if they were trying to "thumb an airplane ride east" as the Group Aloha Flight passed the transport as it nosed by Waikiki for Diamond Head.

The arrival and departure of the last two Transports resulted in many changes in the commissioned personnel of Wheeler Field. When the ST. MIHIEL arrived on August 16th, she brought the following officers and their families: 1st Lieuts. Donald D. Arnold, James E.

Briggs, Kingston E. Tibbitts and Robert E.L. Pirtle. All are now comfortably installed in Air Corps quarters. Due to the policy in the Hawaiian Department of making all Air Corps temporary rank promotions by straight seniority, all of these incoming officers will be promoted to temporary Captaincies and will command flights in the squadrons here.

Lieut. Tibbitts, who has just completed the Engineering and Armament course at the Air Corps Technical School, was assigned to the 6th Pursuit Squadron, and Lieut. Pirtle, who graduated from the last class in the Communications course at Fort Monmouth, N.J., was temporarily assigned for duty with the 75th Service Squadron. Lieut. Arnold, also a graduate of the last Communications course, and Lieut. Briggs, who came to Hawaii from the Air Corps Technical School, are on duty with the 19th Pursuit Squadron.

The pleasure of welcoming these new officers to the 18th Group was tempered by our loss of three Captains - Glenn O. Barcus, James L. Daniel and David P. Laubach. Capt. Barcus, who served as flight and squadron commander of the 19th Squadron, departed Aug. 23d on the ST. MIHIEL for duty at Langley Field. Captain Daniel left the Group S-4 assignment at Wheeler Field for duty at Barksdale Field, and Captain Laubach gave up a flight of the 19th Pursuit Squadron to take up his new duties at Mitchel Field. The Group wishes these officers and their families a pleasant tour at their new stations.

With the sailing of the REPUBLIC on Sept. 3rd, the 18th Pursuit Group lost a trio of its finest athletes in Pierre Butscher of the 75th Service Squadron, Adolph Skaane, 19th Pursuit Squadron, and George P. Hammond, 6th Pursuit Squadron. Butscher has played an essential part in the success of Wheeler Field baseball teams the past three seasons, having guarded the "hot corner" since 1933, when the Birds placed in the runner-up berth. Skaane, in the opinion of numerous followers of sports, is the greatest athlete Wheeler Field has ever known. A veteran of 8 years' service, he came to the air field in 1933. He gained wide recognition both as a baseball and basketball player. He expects to continue service with the Air Corps, and either Mitchel, Randolph or Hamilton Fields will be the fortunate station to have Wheeler Field's finest athlete in its command. Recognized as one of the finest ballhawks Schofield Barracks has ever known, Hammond, Wheeler Field's great right fielder, has been active in baseball since his arrival here over two years ago. His fine batting spurt of .500 for the first round of the 1934 baseball season at Schofield Barracks claimed its share of interest. He has worked hard off the field as well, and for his efforts gained a reserve commission in the Infantry.

The best wishes of Wheeler Field personnel are extended to all three athletes.

Middletown, Pa., Air Depot, Sept. 17th.

Brigadier-General A.W. Robins, Chief of the Materiel Division, and Major T.H. Chapman, Chief of the Inspection Branch, visited the Depot on Sept. 15th, enroute to Williamsport, Pa.

Personnel from the 2nd Transport Squadron were called to Westminster, Md., on September 6th to replace an engine in the O-1G airplane in which Private Poupitch was forced down by a broken connecting rod. No injury resulted to the pilot or airplane.

Clark Field, P.I., August 20th.

All pilots of the 3rd Pursuit Squadron completed their inspection trips to Mindanao for the purpose of inspecting landing fields and terrain. Stops were made at Iloilo, Cebu, Del Monte, Zamboanga and Tacloban.

Major C.W. Ford and Captain C.W. Davies sailed from Manila on a three weeks' trip to Bali and Java.

San Antonio Air Depot, Duncan Field, Texas.

Capt. Wm. A. Matheny, piloting an O-38F on an extended flight from Bolling Field to the West Coast, was forced down with engine Sept. 10th at Gilliland, Texas, while flying between Post Field, Okla. and Midland, Texas. Assistance was immediately sent from this Depot by dispatching civilian mechanic L.J. Milhan by air, piloted by Master Sergeant C.P. Smith, 3rd Transport Squadron, to make emergency repairs. Captain Matheny proceeded to this Depot on Sept. 11th for further repairs and continued on his journey on the 18th.

Capt. W.R. Wolfenbarger and Lieut. B.S. Harrell, accompanied by Cadet Davis and Corporals Hoss and Payne, secured an XA-8 plane to ferry back to Langley Field on the 9th, by way of Barksdale Field, La., Lieut. Harrell and Cadet Davis returning to Langley Field in the transport.

Capt. C.E. Branshaw, formerly Chief Engineering Officer of this Depot for a number of years, visited the Depot recently while en route to foreign service in Hawaii. He recently completed the course at the Air Corps Tactical School.

Major N.P. Walsh, F.A. (with QMC) formerly Quartermaster at this Depot, has been ordered to proceed to Fort Sheridan, Ill., for duty. He was a patient at the Fitzsimons General Hospital, Denver, and left there on Sept. 14th to revert to leave status before joining his new station.

Selfridge Field, Mt. Clemens, Mich., Sept. 17.

Flight Lieut. J.W. Turton Jones, of the British Royal Air Force, was a recent visitor at this station. Colonel Ralph Royce, C.O., welcomed the British officer and accompanied him through the various activities of the post.

The command recently welcomed the following new members of the 1st Pursuit Group: 2nd Lieuts., Air Corps: Eugene Brecht, Jr., Henry B. Fisher, John O. Neal, Harold L. Kreider, William T. Hudnell, Jr., Lawrence O. Brown, Watson M. Frutchey; 2nd Lieuts., Air Reserve: Donald E. Meade, James B. League, Jr., Fred D. Stevers and Edward M. Wittan.

Lieut.-Colonel Ralph Royce departed in a P-28A on Sept. 16th on a training flight to Chicago to visit the 8th Corps Area Headquarters. He was also scheduled to visit Chanute Field, Scott Field and Fort Leavenworth, Kans.

Private John M. Ferris, a native of Detroit, and stationed at Selfridge Field since May, 1934, serving his first enlistment, qualified for appointment as Flying Cadet and was ordered to report to the Primary Flying School for the October class.

The C-14 Transport, with 1st Lt. Charles H. Anderson, Air Corps, as pilot on Sept. 13th, and 2nd Lt. George A. Hersam, Jr., Air Reserve, as pilot on Sept. 15th, ferried 12 students to the Quartermaster Corps Motor Transport School at Camp Holabird, Md.

Langley Field, Va., Sept. 20th.

The 33rd Pursuit Squadron is proud of the fact that three of its former personnel were commissioned in the Air Corps out of the 62 enlisted men of the Regular Army, Air Corps Reserve Officers and National Guardsmen who took the examination at this station. Second Lieuts. Edward S. Allee, John O. Neal and Harold L. Kreider, Air Corps, completing their tour of active duty with the 33d Pursuit Squadron on Feb. 18, 1935, as second lieutenants of the Air Reserve, enlisted as privates in the Regular Army in order to take the examination, and after waiting several months in deep anxiety for news of their appointment or disappointment, Lieut. Allee was notified on July 1st of his success. Lieuts. Neal and Kreider were forced to wait until August 1st before being notified that they had been granted their commissions. Upon acceptance by these officers, they were transferred to Selfridge Field, Mich., for duty. The Squadron wishes them continued success in their new assignments.

On August 27th, Major N. Longfellow was relieved of command of the 33rd Pursuit Squadron and transferred as student at the Air Corps Tactical School, Maxwell Field, Ala. In view of the fact that only officers of high efficiency ratings are sent to this school, the Squadron wishes to congratulate the Major on being chosen and to wish him success in his studies for higher command.

The 37th Attack Squadron recently lost four of its members: Major Haynes to attend the General Staff School, Ft. Leavenworth, Kansas; Lieut. Kreider to Selfridge Field, Mich.; Captain Turner to attend the Air Corps Technical School at Chanute Field, Ill., and Lieut. Read, Air Reserve, to Cleveland, Ohio, to accept a position with the Pennsylvania Air Lines, he having completed his active duty tour. Three new officers recently reported to duty with the 37th, viz: Captain Schramm, 1st Lt. McLennan, and 2nd Lt. Qualm, Air Reserve.

Plans for an organization day picnic by the 37th were interrupted by the weather, and so the basement of its barracks served as the location for an all day party.

Advanced Flying School, Kelly Field, Texas.

The class which is scheduled to report to the Advanced Flying School at noon Tuesday, October 15, 1935, consists at present of 51 flying cadets, 2 foreign officers, and 7 Regular Army officers. These students are now on the Basic Stage at Randolph Field and will probably complete their basic training on or about October 11th. The time of the incoming class for the first three days will be devoted to drawing the necessary school supplies and flying equipment, moving into new quarters, and physical examinations. Ground school will be held Friday and Saturday, October 18th and 19th, and flying training will begin on Monday, October 21st.

It is expected that the present class will graduate from the Advanced Flying School on Saturday, October 12th. The aerial review will be held as usual, weather permitting, at 8:00 a.m. This is the time that the airplanes actually pass the reviewing stand. Graduation exercises will be held at the War Department Theatre at Kelly Field at 10:00 a.m.

Air navigation flights for students of the present class were scheduled as follows:

Attack Section (4 officers, instructors; 5 officers, students; 4 cadets, students; 4 enlisted men, mechanics): Sept. 22 - Kelly Field to Fort Sill, Okla., via Abilene, Texas; 2nd day - Fort Sill to Fort Bliss, Texas, via Midland and Carlsbad, N.M.; 3rd day - Maintenance at Fort Bliss; 4th day - Fort Bliss to Kelly Field, via Marfa and Dryden, Texas.

Bombardment Section (4 officers, instructors; 10 officers, students; 11 Cadets, students; 4 enlisted men, mechanics): Sept. 26 - Kelly Field to Fort Sill, via Hensley Field, Dallas, Texas; 2nd day - Fort Sill to Fort Bliss, via Lubbock and Midland, Texas; 3rd day - Maintenance at Fort Bliss; 4th day - Fort Bliss to Kelly Field via Marfa and Dryden.

Observation Section (4 officers, instructors; 5 officers, students; 6 Cadets, students; 4 enlisted men, mechanics): Sept. 28 - Kelly Field to Fort Sill, via Abilene, Texas; 2nd day - Ft. Sill to Fort Bliss, via Lubbock and Carlsbad; 3rd day - Maintenance at Fort Bliss; 4th day - Fort Bliss to Kelly Field, via Marfa and Dryden.

Pursuit Section (4 officers, instructors; 5 officers, students; 4 Cadets, students; 4 enlisted men, mechanics): Sept. 24: Kelly Field to Fort Sill, via Hensley Field and Paris, Texas; and Hatbox Field, Okla.; 2nd day - Fort Sill to Fort Bliss, via Lubbock and Roswell, N.M.; 3rd day - Maintenance at Fort Bliss; 4th day - Fort Bliss to Kelly Field, via Marfa and Dryden.

2nd Flight, Sept. 30, 1935 (4 officers, instructors; 5 officers, students; 5 Cadets, students, 4 enlisted men, mechanics): Same itinerary as first flight.

Hamilton Field, San Pafael, Calif., Sept. 14th.

Displaying all of the presence of mind, tact and cool judgment which one expects from a vet-

eran Air Corps officer, Lieut.-Colonel C.L. Tinker, Commanding Officer, 7th Bombardment Group, used all of the above mentioned qualities in Southern California on Sept. 5th to the best interests of the service.

While approaching March Field for a landing, Col. Tinker discovered that his retractable landing gear was locked. Ordering Major Sam Brown, Medical Corps, and his crew of two to jump to safety, the Colonel instantly summarized the situation. Instead of landing the ship at March Field, with the consequent crack-up, he flew to Rockwell Field. As it was necessary to damage the ship in landing, anyway, he chose to fly to the repair depot and did so, thereby saving the government considerable cost which would have accrued from shipping the plane to San Diego from Riverside.

Advices received at Hamilton Field indicate that by October 1st the 88th Observation Squadron from Brooks Field will be on a duty status at this field.

Major Robert C. Murphy, Medical Corps, was relieved from duty at this station and assigned to Fort Stevens, Oregon, Sept. 15th.

First Lieut. Sam W. Cheyney reported for temporary duty August 31st, enroute to the Philippine Department.

---oOo---

LIBRARY NOTES

Some of the more interesting Books and Documents recently added to the Air Corps Library

D 52.41 Hispano Suiza 9. Le moteur Hispano Suiza a refroidissement liquide, by societe Francaise Hispano-Suiza, 1935. 18p. English title: Hispano Suiza motor with liquid cooling, French text.

F 10 U.S. 15. March Field, by Falk Harmel, 1935, published in "Bee-Hive," Sept. 1935. An account of the history of March Field.

F 10 U.S. 42. Marine air terminals, by Aeronautical Chamber of Commerce of America, 1935. 16p. Book distributed for purpose of seeking establishment of Marine air terminals in all water-front communities.

* 629.131 L54. Germany's air force, by Otto Lehmann-Russbult. London. George Allen & Unwin, Ltd. 1935. 160 p. An analysis of the German air force that has been built up in deliberate contravention to the Peace Treaty. A rearmament that is purely offensive. Tells of the influence that this is having on all other European countries and their people. This rearmament shows marked superiority in "War potentiality" says the author. The estimation of number of German planes are from 1750 to 2000. The author also states that there is no defense against aircraft as yet and that the only solution of this formidable force is a system of collective security.

623.74 P91. La guerra nel cielo, by Clemente Prepositi, 1930. 192p. English title: Air War. Brief history of aeronautics in war. Italian text.

629.13 Un3us No. 1150. Finders used in locating targets by bombers in the Czecho-Slovakian air force. Wash. U.S. Army Air Corps, Aug. 12, 1935. (Stencil U-1150, A.C.) 2p. Trans. B-8977.

629.144 A16. Airports and established landing fields in the United States. Ed. by Hackensack, N.J. The Airport Directory Co., 1935.

---oOo---

TECHNICAL INFORMATION AND ENGINEERING NEWS Air Corps Materiel Division

Type E-1 Computer. The Type E-1 Computer, for use by the navigator in solving dead reckoning problems, has been improved by the addition of a diagram permitting a rapid and simple solution of double drift problems. The computer incorporating this change will be known as the Type E-1A.

Sound-Proof Flying Helmets. An Engineering Section Memorandum Report, Serial No. U-54-322, was prepared September 11, 1935, covering the results of a study to determine the efficiency of different methods and materials for sound-proofing flying helmets. In the conclusions, it was stated that sound-proofing material fabricated into conventional-shaped flying helmets is not effective, due to the fact that from one-half to two-thirds of airplane sounds reach the ear from under and not through the helmets. Sealing the free edge of the conventional-shaped flying helmet around the face and neck by means of pressure to exclude sound is not practical due to the discomfort induced.

Medical Field-Equipment. A representative of the Materiel Division visited the Medical Field-Equipment Laboratory, Carlisle Barracks, Carlisle, Pa., on September 11, 1935, for the purpose of coordinating work being done by that laboratory in assembling medical field-equipment recently developed at the Materiel Division. This equipment (consisting of aeronautical first aid kit; flight-service chest; crash unit; base-group aid equipment; Arctic rescue unit, and new type Air Corps folding field litter) is now or will be available by November 1, 1935, for field service test by the Air Corps - for all units up to and including groups.

---oOo---

PRACTICE FLARE LANDINGS AT CHANUTE FIELD

At the close of the flying year, 1934-35, at Chanut Field, Rantoul, Ill., all pilots, physically on duty at the station, have, during the year, each completed two practice night landings with Type M-3 or M-8 parachute flares. Conducted under the supervision of Colonel Junius W. Jones, Air Corps, Commanding, these practice night landings have been incorporated into the local flying requirements as necessary training for emergency landings to be encountered during routine night flying.

Each of the landings has been accomplished without aid of any lighting other than from the flare, all airplane lights and field lighting having been extinguished, with the exception of the airplane's running lights. It is considered that, as a result of this practice, each of the pilots, many of whom had not previously encountered opportunity to use parachute flares for night landings, will in case of necessity benefit much from the experience of having actually made two such landings. It is contemplated including this element in future local annual flying requirements.

---oOo---

P E R S O N N E L N O T E S

The duty assignments of the following-named Air Corps officers, holding temporary increased rank, were changed, these officers, however, still retaining their temporary rank:

Major Paul L. Williams from duty with Air Corps Primary Flying School to duty as Director of Flying Training, Air Corps Training Center, Randolph Field, Texas.

Major John A. Laird relieved from duty with 41st Observation Squadron and assigned as Executive Officer, Air Corps Advanced Flying School, Kelly Field, Texas.

Major Claire L. Chennault relieved from Air Corps Tactical School, Maxwell Field, Ala., and assigned as Commander, 84th Service Squadron.

Major Oliver S. Person relieved from 60th Service Squadron, Barksdale Field, La., and assigned as Intelligence and Operations Officer, 3rd Attack Group, that station.

Major Oliver P. Gothlin, Jr., relieved from 20th Pursuit Group, Barksdale Field, La., and assigned as Commander, 77th Pursuit Squadron.

Major Walter K. Burgess from 48th Pursuit Squadron, Chanut Field, Ill., to duty as Engineering Officer, Air Corps Technical School.

Captain Donald J. Keirn relieved from 9th Bombardment Squadron, Hamilton Field, and assigned as Engineer Officer, 69th Service Squadron at that station.

Captain Wilbur Erickson relieved from duty with Station Complement, Hamilton Field, and assigned Supply Officer, 70th Service Squadron.

Captain Alvord V.P. Anderson from 70th Service Squadron, Hamilton Field, to duty as Supply Officer, 69th Service Squadron.

No change of station involved.

V-6867, A.C.



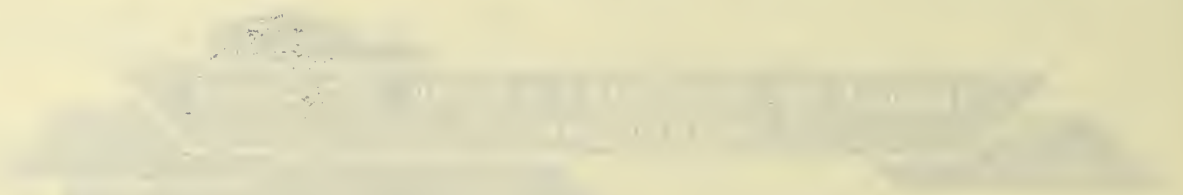
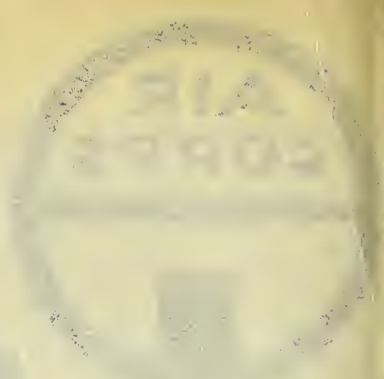
NEWS LETTER

Issued by the Chief of the Air Corps
Washington, D. C.



The
Eagles
Nest

LETTER NEWS



Information Division
Air Corps

October 15, 1935

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

AIR PROGRESS IN THE UNITED STATES

By Brig.-General Oscar Westover, Acting Chief of the Air Corps

A most unusual opportunity to participate in a great national movement for the advancement of American aeronautical activity is presented to us this Fall by the National Aeronautic Association. September 23rd to November 1st has been designated as "Air Progress" Period.

During this period, unprecedented efforts are being made to acquaint the public with facts concerning the rapid development of aerial equipment essential to proper national defense, air transportation of passengers and freight, and air travel in privately-owned aircraft.

Through its many chapters located in the principal cities and towns of this country, the N.A.A. is stimulating the interest of youth through glider and model airplane activities in schools and clubs and by publications. The work of the Association in the promotion of air meets and exhibitions, and in bringing again to America the more important world air records is too well known to need amplification here. In fact, the national interest in this movement may be gauged by a glance at the names of those comprising the officers and advisory board, which reads like a "Who is Who" list. With Senator William G. McAdoo, of California, as President, and James H. Doolittle, formerly of the Army Air Corps, Vice President, leading the Association, much valuable work is bound to result.

President Roosevelt has shown the importance he attaches to the movement by issuing a proclamation to the Nation, appointing an "Air Navigation Week."

A PROCLAMATION

"WHEREAS the social and economic progress of the Nation is dependent to a large degree upon the development of transportation and communication facilities; and

WHEREAS the development of safe and rapid commercial air transportation has made notable progress during the last decade; and

WHEREAS a vital factor contributing to the outstanding accomplishments of the United States of America in this field has been, and still is, the establishment and operation of a federal airways system reaching into all sections of the United States; and

WHEREAS the National Aeronautic Association has determined upon recognition of the progress made in aviation,

and has set aside the period between September 23 and November 1, 1935, in recognition thereof;

NOW, THEREFORE, I, FRANKLIN D. ROOSEVELT, President of the United States of America, do hereby designate and proclaim the week beginning October 14, 1935, as Air Navigation Week, and I particularly urge State and municipal officials, civic and commercial organizations, school authorities, and the press to call attention to the aerial transportation achievements already accomplished, to set forth the advantages which may accrue as the result of continued development in this field, and to encourage the study of ways and means by which aerial transportation can contribute more effectively to the social and economic progress of the human race.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this twenty-sixth day of September, in the year of our Lord nineteen hundred and thirty-five, and of the Independence of the United States of America the one hundred and sixtieth."

In a letter to Army aviators, Senator McAdoo, President of the National Aeronautic Association, gives us this message:

"You are probably familiar with the National Aeronautic Association and therefore realize that it exerts a constructive influence in all phases of aviation throughout the country. We can safely say that it has assisted in bringing about the decided upward trend that has been evident in aviation activities during the past few months.

We will continue to contribute substantially to the rapid and orderly development of aviation. We have neither political affiliation nor profit motive and I feel that we are in an excellent position to render a distinct public service.

Our relations with the aviation divisions in the various government departments are extremely cordial and, therefore, on behalf of the National Aeronautic Association, I extend to you a cordial invitation to become a member."

Mutual interest in each other's organization has always existed between the Air Corps and the Association; an interest which gives every promise of growing in extent and in importance. Until November 1st the membership fee will be reduced to from \$5.00 to \$3.00 for the year, which

V-6876, A.C.

includes a year's subscription to the National Aeronautic Magazine, as well as full membership in the Association.

This non-political organization is the one common meeting ground of the country's armed aerial services, the Bureau of Air Commerce and other governmental agencies, aircraft manufacturers, municipal activities, and individuals interested in Aeronautics. It is believed that membership of Air Corps personnel in the N.A.A. will increase their value to the service and provide them with many pleasant professional and social contacts. The Air Corps should not only contribute heavily to the promotion of Aeronautics, but should be ever watchful for new ideas from any source which may increase the efficiency and effectiveness of our units. Membership in a local chapter is sure to broaden one's outlook and materially aid that community.

As a result of several years' personal observation and many personal contacts, and in view of the fact that the National Aeronautic Association has no political axe to grind, I feel it a privilege heartily to endorse its present "Air Progress" campaign. I hope that a large number of our personnel will support the N.A.A. not only with their membership but with their active participation in meetings and other activities. For after all, it will be only through the cooperation of our many varied air activities that a lasting leadership in military and commercial aviation will be maintained.

---cOo---

GENERAL HEADQUARTERS AIR FORCE TRANSPORT

A new Douglas Transport fitted up as a Headquarters airplane for use of the staff of the General Headquarters Air Force was flown to Wright Field the latter part of September. Designed to serve as a flying office in which the staff officers could be moved as a unit, with facilities for carrying on work while in flight or at rest on the ground in whatever location feasible, the airplane, which is the standard commercial type Douglas transport, presented a most shipshape interior.

Immediately to the rear of the pilot's cockpit is a radio room with sending and receiving sets, enabling the commanding general to keep in touch with all units of the force. A locker compartment for confidential maps, dispatches or data is alongside. The commanding general's office is immediately aft of the radio room with a connecting window. This office contains a desk and two chairs, and is to be used for conferences with staff or other officers during emergency flights or maneuvers.

To the rear of the office and occupying the central section of the fuselage

are four chairs with desks on either side of a center aisle. These are for the four members of the staff heading G-1, G-2, G-3 and G-4. Desks are arranged to hold all types of stationery and writing equipment, and have extensions for the study of maps and large drawings. Furniture is of walnut. Buffet, lavatory, and ample baggage facilities are provided.

---cOo---

TOUR OF UNITED STATES BY HOUSE MILITARY AFFAIRS COMMITTEE

Members of the House Military Affairs Committee are scheduled to make a tour of the United States by air for the purpose of visiting various localities in the interests of National Defense. The vehicle of transportation will be a Condor Transport airplane, which will be piloted by Captains George C. McDonald and Hez McClelland, Air Corps. An enlisted radio operator and two enlisted mechanics from Bolling Field will also accompany them.

Starting from Bolling Field on October 15th, the localities to be visited will be Chicago, Ill.; Omaha, Neb.; Cheyenne, Wyoming; Salt Lake City, Utah; Fort Lewis, Wash.; San Francisco and San Diego, Calif.; Tucson, Arizona; El Paso and San Antonio, Texas; Shreveport, La.; Montgomery, Ala.; Forts Benning and McPherson, Ga.; and Fort Bragg, N.C.

Hon. John J. McSwain, Chairman of the House Military Affairs Committee, who heads the Congressional party of inspection, will be accompanied by Congressmen J. Joseph Smith, of Conn.; Matthew J. Merritt, of New York; and Mr. Robert Frazier, acting clerk of the Committee. Congressman Leslie C. Arends, of Illinois, may join the party at Scott Field, Ill., and Congressmen Sam L. Collins, John M. Costello and John F. Dockweiler, all of California, may board the plane later for part of the trip.

Senator Morris Sheppard and Congressman Thomas L. Blanton and Maury Maverick, all of Texas, may connect with the party for short trips to Texas points.

---cOo---

HEAVIER-THAN-AIR TRAINING FOR AIR CORPS OFFICERS

Three Air Corps officers, each of whom hold the ratings of "Airship Pilot," "Balloon Observer" and Airplane Observer, began heavier-than-air training at the Primary Flying School, Randolph Field, Texas, with the October 15th class.

These three officers are Major William O. Butler, who graduated in June from the Command and General Staff School, Fort Leavenworth, Kansas; Captain James F. Powell, who graduated last June from the Army Industrial College, Washington, D.C., and Captain R.R. Selway who, prior to being ordered to Randolph Field, was stationed at Scott Field, Ill.

ARMY AIRMEN AIL IN SEARCH OF LOST COMMERCIAL PLANE

The officials of the Aerovias Nacionales have expressed to the Commanding Officer of Albrook Field, Panama Canal Zone, their deep appreciation for the response of the 16th Pursuit Group to their request for assistance in locating the Travelair Cabin plane which crashed on September 13th in the mountains north of Chame, Republic of Panama. This wreck was the worst in the history of commercial aviation in the Republic, resulting in the death of Pilot Marstrand and seven passengers.

The line operates between Panama City, David and El Volcan, Panama, on a daily schedule. On the morning of the tragedy, due to a tremendous increase in commercial business, the line was operating a double-header out of Panama for David, the two planes taking off within a minute of each other. A heavy cloud bank covered the mountain tops, and one plane went out over Panama Bay around the cloud bank, and after this detour arrived safely at David. Pilot Marstrand elected to go over the top of the cloud bank and disappeared.

At approximately noon, President Malek notified the Commanding Officer at Albrook Field that Marstrand was four hours overdue. Four patrols of two airplanes each from the 16th Pursuit Group were immediately dispatched over the route in an effort to locate the missing passenger plane, and the search continued until approximately 6:00 p.m., when two natives who had observed the crash at 7:10 in the morning, reached Bejuca, where there was a telephone, and advised government representatives of its exact location. The natives had to travel through the jungle for nearly eleven hours to make a distance of about eight miles. The following day, the 16th Pursuit Group maintained contact with the ground rescue party until it reached the scene of the wreck in the jungle and returned to the highway with the body of the pilot. All passengers were buried at the scene of the crash.

---oOo---

MESSAGE IN BOTTLE TRAVELS LONG DISTANCE

On a recent air navigation flight to Jaque, Republic of Panama, Major Donald P. Muse, Air Corps, stationed at Albrook Field, Panama Canal Zone, was handed an unsealed letter by one of the natives, who requested the Major to mail it when he returned to Albrook Field. The letter was addressed to a Minneapolis girl and was written by a passenger on one of the Grace liners, enroute from Panama to San Francisco, was sealed in a bottle and thrown overboard somewhere off the coast of Costa Rica. It is interesting to note that the message traveled

over 600 miles before it was washed ashore at Jaque and picked up by a native there.

---oOo---

TARGET PRACTICE FOR 23rd BOMB. SQUADRON

All the officers and 100 enlisted men of the 23rd Bombardment Squadron, stationed at Luke Field, T.H., moved to Bellows Field, Waimanalo, on September 4th, and began firing on ground targets the following day. Unfavorable weather prevented flying one morning and part of another, but most of the practice was completed in ten days. Lieut. Armstrong was the first to qualify, making a score of 698 on aerial targets and 282 on the ground. So far, Lieut. William Capp is high man with a total score of 1352 for ground and aerial targets.

---oOo---

PLUNGES 3,000 FEET MINUS PARACHUTE

A grim tragedy brought a sudden termination to the life of a Hamilton Field soldier on September 19th.

Private George H. Brinkley, 22, of St. Joseph, Mo., a member of the 9th Bombardment Squadron, was riding in the nose of a Bomber piloted by Major John M. Davies in the vicinity of Point Reyes. In some inexplicable manner, Brinkley, who had removed his chute for the sake of comfort, accidentally released the lever operating the trap in the floor of the Martin B-12 Bomber. He instantly plunged 3,000 feet to his death.

Inasmuch as the soldier was not missed for a few minutes, considerable difficulty was encountered in the recovery of the body. A searching party was ordered out immediately by Lieut.-Colonel C.L. Tinker, commanding officer of Hamilton Field, but returned late at night, reporting failure. A larger party of 250 men and 2 officers was ordered out the next day, but their search proved in vain. The body was finally recovered on September 21st at 3:30 p.m., by a member of the Muir Woods CCC Camp, the men of this camp being ordered into the search by Corps Area Headquarters.

---oOo---

TEST OF NEW A-2 KAPOK COATS

The new A-2 Kapok coats were issued to the 50th Observation Squadron, Luke Field, T.H., and were recently tried on by a few pilots of this organization. These coats are well ventilated for the tropics and should be much cooler than the old "smother" type. In addition to this, they are a bright yellow, a color that should be easily distinguished by rescue planes in search of those who find it necessary to bail out.

V-6876, A.C.

KELLY FIELD GRADUATES MORE ARMY FLYERS

A class of 67 flying students is scheduled to graduate on Saturday, October 12th, from the Air Corps Advanced Flying School at Kelly Field, San Antonio, Texas. Beginning with an aerial review at Kelly Field at 8:00 a.m., in which all the graduates are slated to participate, the graduation ceremonies will be resumed at ten o'clock in the War Department Theatre at that field, when diplomas will be awarded these new members of the flying fraternity, as well as the much coveted wing insignia.

A year ago, when these graduates began flying training at the Air Corps Primary Flying School at Randolph Field, they were members of a class of 142 students, comprising 63 officers of the Regular Army, 3 officers from foreign countries, and 76 flying cadets. It will thus be noted that 47% of the original class successfully completed the intensive one-year flying course at the Air Corps Training Center.

Aside from one Air Corps officers and the three foreign officers, all of whom will graduate, 30 of the 61 West Point graduates who began flying training a year ago last October, will receive their "Wings," or 49%, which is somewhat higher than the general average of approximately 45%, according to statistics compiled over a period of years in the past.

The Air Corps officer, Major Edmund W. Hill, a veteran lighter-than-air pilot, who now holds the ratings of Airship Pilot, Balloon Observer and Airplane Observer, will, through his qualification as a heavier-than-air pilot, receive a fourth rating, that of Airplane Pilot. This last-named rating will also be given to the remaining graduates.

With the exception of the three foreign student officers, who will return to their respective countries, the student officer graduates will be transferred to the Air Corps. The Flying Cadets will be assigned, under their Cadet status, to active duty with Air Corps tactical squadrons for the period of one year. Should their service during this additional year of training prove satisfactory, they will be commissioned second lieutenants in the Air Reserve and, should funds then be available, they will be given another year of active duty with Air Corps tactical squadrons, this time under their status as Reserve officers.

With seven native sons in the graduating class, Texas has the largest representation among the various States, followed by New York with six. Washington, the nation's capital, with four students, leads the various cities represented.

The Advanced Flying School graduates are listed below, as follows:

AIR CORPS

Major Edmund W. Hill New London, Conn.

OTHER BRANCHES OF THE ARMY

All Second Lieutenants

Calif. George B. Dany, CAC San Diego
D.C. Jack J. Neely, Inf. Washington

D.C.	Raymond J. Reeves, Cav.	Washington
	Hudson H. Upham	Washington
Fla.	Paul C. Ashworth, C.of E.	Summerfield
Ga.	Paul T. Hanley, Inf.	Atlanta
Ill.	John G. Benner, Inf.	Anna
Kans.	John B. Cary, C.of E.	Emporia
	William M. Gross, F.A.	Salina
Idaho	John M. Hutchison, Cav.	Coeur d'Alene
Md.	William H. Wise	Edgewood
Minn.	Harvey T. Alness, Cav.	Bayport
Mo.	Karl W. Bauer, Inf.	Jefferson City
	William S. Stone, F.A.	St. Louis
N.H.	Wilson H. Neal, F.A.	Rochester
N.Y.	John DeP. T. Hills, Inf.	Albany
	Frank C. Norvell, F.A.	Ft. Wadsworth
	Byron E. Brugge, CAC	Ozone Park, L. I.
	Herbert M. Baker, Jr., Inf.	Warrensburg
Neb.	Richard A. Legg, Inf.	Alma
Nevada	Dale O. Smith, Inf.	Reno
Okla.	Wm. M. Canterbury, CAC	Muskogee
Oregon	Curtis D. Sluman, CAC	Portland
Penna.	Albert T. Wilson, Jr. Cav.	Easton
S.C.	Lawson S. Moseley, Jr., CAC	Greenville
Texas	John W. White, Inf.	Uvalde
Va.	Elvin S. Ligon, Jr., Inf.	Nottoway C.E.
W. Va.	Walter C. Sweeney, Jr., Inf.	
Wis.	Arno H. Luehman, Inf.	Milwaukee
Wyo.	Jack E. Shuck, CAC	Casper

FOREIGN OFFICERS

Ismail Hikmet, 1st Lieut., Turkish Army.
Ismail Raid, 1st Lieut., Turkish Army
Fructuoso P. Suarez, 1st Lieut., Mexican Army.

FLYING CADETS

Ala.	Theron Coulter	Enfāula
	John M. Reynolds	Mobile
	Horace A. Shepard	Mobile
Calif.	Conrad J. Herlick	Helendale
	Robert C. Love	Los Angeles
Colo.	James O. Ellis	Greeley
D.C.	Robert W. Hall	Washington
Colo.	Thomas L. McKissack	Englewood
Fla.	Robert C. Paul	Watertown
Idaho	John L. Randall	Moscow
Iowa	Marion Malcolm	Iowa City
Kans.	Raleigh E. Macklin	Ottawa
Mass.	Stanley A. Zidiales	Middleboro
N.Y.	Peter H. Remington	Watertown
N.C.	Franklin M. Cochran	Davidson
Ohio	Howard F. Nichols	Marion
N.Y.	James W. Allen	Ithaca
Okla.	Howell G. Crank	Tulsa
Oregon	Willard W. Lazarous	Corvallis
	Charles E. Bockman, Jr.	Portland
Texas	James W. Chapman	Austin
	Richard T. Kight	Claude
	William J. Moser	Dallas
	Bigham T. Kleine	San Antonio
	Herbert M. West, Jr.	San Antonio
	Cy Wilson	Longview
S. D.	Evert W. Hedlund	Beresford
Vt.	Merrill E. Thayer	Brattleboro
Wash.	Quentin T. Quick	Bellingham
	Edward A. LePenske	Tacoma
W. Va.	Graves H. Snyder	Lewisburg
Wis.	Maxwell H. Crowell	Shell Lake
Ark.	Edward L. Reid	Little Rock

CADETS TO BE COMMISSIONED IN AIR RESERVE

The Chief of the Air Corps has recommended to the War Department that 28 Flying Cadets, who graduated from the Air Corps Advanced Flying School, Kelly Field, Texas, in October, 1934, and who have just completed their year of active duty under their cadet status with Air Corps tactical units, be commissioned second lieutenants in the Air Reserve, and that they be placed on extended active duty as Reserve officers at the various Air Corps stations, as indicated below:

To Barksdale Field, La.:

Oscar K. Lawing	Little Rock, Ark.
David G. Desmond	Salem, Mass.
Francis R. Drake	Muskogee, Okla.
Charles H. Jeter	Wann, Okla.
William H. Council	Ingomar, Pa.
Gilmore V. Minnis	Hadley, Pa.
Oliver E. Ford, Jr.	Crockett, Texas
Harney Estes, Jr.	Granbury, Texas
Alexander F. Sangster	Houston, Texas

To Brooks Field, Texas:

John H. Cheatwood	Ruston, La.
Wendall P. Lester	Houston, Texas
Ben A. Mason, Jr.	Houston, Texas

To Langley Field, Va.:

Donald G. Ogden	Baton Rouge, La.
Horace Brock	Philadelphia, Pa.
Harry D. Martin	Easley, S.C.

To Mitchel Field, L.I., N.Y.:

William A. Miller	St. Louis, Mo.
Henry P. Luna	New York, N.Y.
Joseph E. Hale	Philadelphia, Pa.

To Hamilton Field, San Rafael, Calif.:

Norman L. Callish	Los Angeles, Calif.
Radcliffe C. Clausen	Los Angeles, Calif.
Herbert E. Knieriem	Modesto, Calif.
Roderick O. Cote	Manchester, N.H.
Charles E. Fisher	E. Marion, N.C.
Arthur M. Keppler	Houston, Texas
Fred C. Johnson	Salt Lake City, Utah

To Selfridge Field, Mich.:

William W. Harding	Sutton, N.D.
Albert F. Olsen	Sutton, N.D.

---oOo---

ACTIVITIES OF 4TH OBSERVATION SQUADRON

During the period between September 1st and 15th, the 4th Observation Squadron, stationed at Luke Field, T.H., was engaged in various tactical training missions which consisted of Aerial Reconnaissance; Two-Way Radio Communications; Instrument Flying; Night Flying and Aerial Photography. Under the direction of Captain W.W. Messmore and 1st Lieut. Walter A. Fenander, the Photo Section has prepared an intensive and thorough schedule for Photographic missions. Following this schedule, the officers engaged in some fifteen hours of Pin-Point and Oblique Photography for this period.

---oOo---

NEW COURSE AT AIR CORPS TECHNICAL SCHOOL

Under authority of the War Department, and under the supervision of the Commandant, Colonel Junius W. Jones, there will be incorporated into the Air Corps Technical School at Chanute Field, Rantoul, Ill., a new course to be presented under the name of Basic Instruction.

There has been a long felt need for such a course, which materializes with the School Year 1935-36. Its object is to provide a uniform system of basic preparation for all enlisted students entered in the Air Corps Technical School in order to fit them better for technical specialization in the various main courses for which they are sent to the school, resulting in students more highly and more uniformly qualified to take up their specialized subjects.

As a direct result, the technical departments proper receiving a student from the Basic Course will be able to confine their instruction to their respective specialization without devoting time to basic work.

The Department of Basic Instruction is being organized under the immediate direction of Captain James S. Stowell, Air Corps, who has been assigned to duty as Director of the Department.

Instructional personnel and equipment is being drawn from other departments of the Air Corps Technical School where various subjects of basic instruction have been taught. One hangar is being remodeled to suit the needs of the department for shops and classrooms, and it is expected that the department will receive its first class at the beginning of the school year, consisting of approximately 60 students.

The curriculum of the Basic Course will include, for its first year, about eight weeks, according to the needs of the individual specialization departments of the school, with the subjects of Mathematics, drafting, elementary metal work, electricity, and woodwork, as applicable to the course which the individual student will later pursue.

The addition of the Department of Basic Instruction to the Air Corps Technical School, together with the Department of Clerical Instruction, which was established in 1933, brings the total of Departments of the school to six, including the earlier established departments of Mechanics, Photography, Communications and Armament.

For the coming year it is contemplated entering in this course students who have been chosen for specialized courses, although experience may render it desirable in future years to arrange for students to be entered in Basic Instruction and, as a result of their work and adaptability demonstrated in that course, to be designated for their respective lines of specialization. In any event, the establishment of this new phase of instruction will prove invaluable in preparation of students for their various technical branches of instruction and, in addition to providing a uniform standard of basic work, will result in elimination of much duplication of instruction throughout the other departments.

"INVASION" OF IMPERIAL VALLEY CITIES

Three Imperial Valley cities will be peacefully invaded and occupied by airplanes and ground troops for a ten-day period during the middle of October. The tactical organization staging the maneuvers is the 17th Attack Group of March Field, Calif., composed of the 34th, 73rd and 95th Attack Squadrons and the 64th Service Squadron. The 17th Group will be commanded by Lieut.-Colonel John H. Pirie, Air Corps, during the field training period which will run for a period of twelve days.

Cities to suffer the thrills of the mimic occupation and over which many of the scheduled sham air battles will be held are Brawley, Imperial and Calexico, Calif. Announcement of the maneuvers was made recently at the headquarters of the First Wing of the General Headquarters Air Force at March Field by Brigadier-General Henry H. Arnold, Wing Commander.

Thirty airplanes, 40 officers and 350 enlisted men are expected to fly or ride by truck to the Southland cities. All of the enlisted men and some of the officers will be transported to the three camps by the 44 trucks and 10 motorcycles of the 64th Service Squadron, commanded by Major Orin C. Bushey.

Clerks and airplane mechanics of the 17th will not have to worry about kitchen police and other camp duties, as these functions will be performed by the men of the 64th Service Squadrons. This squadron will also have the task of setting up and tearing down the camps in the three cities.

Training activities at the camps of the Mexican border towns will consist partly of problems in unit and group navigation to points away from the valley and rendezvous exercises. Aerial machine gunnery with ground "strafing" and other forms of "attack" training, together with combat exercises in air bombing, will keep the 17th's pilots on the move during most of their 10-day stay in the Imperial Valley.

To train the officers and enlisted men of the three squadrons in field work, three camps similar to the ones proposed for the Imperial Valley were scheduled to be set up at March Field at widely separated portions of the reservation. The camps, which will be just as completely equipped as the ones used in actual field service, will be operated for one day only.

Combat and gunnery problems will take place the same day, the units operating from the temporary field camps on the Air Corps post. The bombing and aerial gunnery will take place at Muroc Dry Lake.

---oOo---

RESERVE ACTIVITIES ON PACIFIC COAST

Ten hours "under the hood" was accomplished by each Reserve officer in the field with the 489th Bombardment Squadron, Air Reserve, during the 14-day encampment in July.

According to Captain John H. Gardner, Air Corps, Non-Divisional Unit Instructor, some of the officers should have received credit for R-1 (acrobatics) rather than R-28 (instrument flying) for the first few hours of their time "under the hood."

In addition to the instrument flying, each officer flew solo fifteen hours, all of which time was utilized in tactical flying.

During the first two months of the fiscal year, the Reserve officers of the 489th have accumulated approximately 375 hours of solo, a good percentage of which has been instrument flying.

The home base of the 489th is located at the King County Municipal Airport (Boeing Field). The Squadron has the use of one-half of Hangar #2. Visiting Air Corps pilots are assured hangar accommodations for their ships and a welcome from Non-Divisional Unit Instructor Captain John H. Gardner and the officers of the Squadron.

"Air Corps officers desiring to familiarize themselves with the Pacific Northwest territory, a territory that will undoubtedly be an important Air Corps base," concludes the News Letter Correspondent, "might do well to head this way when on extended cross country flight."

---oOo---

AVIATION CAREER INCENTIVE TO EDUCATION

Military aeronautics is causing boys in Spokane, Wash., to consider far more favorably a college education, it was learned by Lieut. Laurie Heral, adjutant and recruiting officer for the 41st Division Aviation, Felts Field, Spokane, Wash.

It was recently announced in the local newspapers that a dozen vacancies existed in the Division Aviation.

"Plenty of boys came out to enlist," reported Lieut. Heral. "Naturally, they all wanted to go to the Army Air Corps flying school, but were advised that it was necessary for them to have two years of college education. During our early discussion it developed that many of the boys did not intend to attend college, it apparently being their belief that education is not exactly necessary to fly an airplane. In several instances parents of these same boys have expressed appreciation for what we told their sons, explaining that they are now interested in going to college."

At no time has the 41st Division Aviation found it difficult to maintain a full complement of enlisted personnel, practically all of which are high school boys.

V-6876, A.C.

TACTICAL INSPECTION OF 1st PURSUIT GROUP

Seven officers from the GHQ Air Force Headquarters at Langley Field, Va., arrived at Selfridge Field, Mich., on September 22nd to conduct a tactical inspection of the First Pursuit Group. These officers were Lieut.-Colonel Walter R. Weaver, Major Robert Olds and Captain Roland O.S. Akre, Air Corps; Lieut.-Colonel Cedric W. Lewis, Signal Corps; Lieut.-Colonel Charles C. Drake, Quartermaster Corps; Lieut.-Colonel Russell L. Maxwell and Captain John A. Wheeler, Ordnance Department.

The tactical inspection was begun on September 23rd, when a part of the 56th Service Squadron was directed to move by convoy to Pontiac to establish a camp and maintain the Group for an overnight stop, and a part of the 57th Service Squadron was directed to establish camp and maintain airplanes of the Group at "Camp Weaver" on the south side of the home airdrome.

On September 24th, the unit of the 56th Squadron detailed for duty at Pontiac, Mich., returned to the post, and another unit of that organization was dispatched to "Camp Weaver" on the home airdrome; while the unit of the 57th Service Squadron broke camp at "Camp Weaver" and another group of men from that organization was sent by convoy to Hartung Airport, Detroit, Mich., to establish a camp for the Group airplanes at that place. The latter camps were broken up during the morning, the men proceeding to their home station.

These movements proved of importance in that they indicated the equipment necessary for the establishment of a temporary camp at short notice for use of the Group; the transportation needed for such a move; and the question of efficiency of the units of the Selfridge Field command. The inspecting officers departed on the afternoon of September 25th.

---oOo---

PARADE OF STARS IN NEW YORK PLANETARIUM

Air Corps officers who at one time or another may be in the vicinity of New York City, and who are interested in navigation, will find it of much interest and profit to visit the Hayden Planetarium at the American Museum of Natural History.

Equipped with an 11-ft. Zeiss-created projector, one of the finest in the world, which shows the march of the heavens through its thousands of lenses, the Planetarium in its first public showing attracted some 750 persons, who were amazed when the closing of a switch caused almost 3,000 celestial bodies to appear on its dome simultaneously.

The illumination of the synthetic sky came after Charles Hayden, whose name

the planetarium bears in commemoration of his \$150,000 gift for the projection apparatus, handed the key of the control board to Mr. F. Trubee Davison, president of the museum, and after brief dedication speeches by Mr. Davison, Dr. John H. Finley and Robert Moses, Park Commissioner.

Dr. Clyde Fisher, curator of the planetarium, stepped to the control board and explained that the projection apparatus would be set in operation with the aid of a cosmic ray detector borrowed from Columbia University. He said that this scientific detective would pick up the invisible cosmic rays as they entered the planetarium through the thick layers of steel and concrete. As the rays struck a detector tube, he said, they would cause it to ionize and break down, local currents would flow in, relays click and the switch would close.

As the curator explained the workings of the planetarium the inner surface of the white dome began to fade and in time the room was in absolute darkness. The curator's voice sounded through the blackness for a time, because it takes human eyes about ten minutes to become adjusted to such conditions. The soft click of a switch sounded, followed by a noise similar to driven rain on a tin roof. This was the reverberation of the cosmic rays and then the stars flashed out on the dome. The effect of the sudden change from utter darkness to a brilliant and cloudless firmament was reflected in the exclamation from the spectators.

The illusion of limitless space was almost perfect. In the exact center of the room was the Zeiss projector, an instrument eleven feet in height, with two gigantic knobs, the whole a delicate mechanism built with the precision of a fine watch. It sent out rays of light which upon reaching the steel screen curtain inside the dome became the stars and planets.

Although only 75 feet in diameter, the dome seemed to expand as the lights were turned down and then to melt away as the stars became visible. The skyline as viewed from a point in Central Park ran around the base of the dome at the horizon line. It was cut from steel plates, painted black and set out a short distance from the inner surface of the dome. Thus, when the projector was in motion, the moon, sun and stars seemed to rise from behind familiar buildings.

Dr. Fisher turned the control board over to Prof. Wm. H. Barton, Jr., assistant curator of the planetarium, and when the latter caused the projector to rotate in first one and then another plane, a steady whirring sound came from the instrument, and the stars, the planets, the Milky Way and all the other celestial bodies moved across the sky. The effect was puzzling and some of the spectators were inclined

V-6876, A.C.

to think that the entire dome was in motion.

The voice of the speaker accompanied the celestial parade, and as he talked he sent out a beam of light which caused an arrow to appear and point to the constellations or stars which entered into his explanation.

The sun, reduced in brilliance lest it eclipse the stars, rose, passed across the sky and sank behind the western horizon. A year passed in three minutes. The planets swung playfully among the stars and the moon hurried by as though anxious to show off all its phases at once.

The lecturer took the spectators on a sky-trip to the South Pole at the rate of 5,000 miles a minute. The sky rolled overhead and unfamiliar star fields appeared. At the Pole, the stars moved around at the same height above the horizon. Upon returning to New York the audience saw Donati's comet moving about and following the path it took when it appeared in 1858.

Meteors began to streak among the stars and in a few moments the great shower of 1883 was being reproduced by the man at the control board. The speaker pointed out various constellations and finally came the dawn, which to many of the spectators was the most effective illusion of the demonstration.

The black sky began to pale at the horizon and soft music sounded from somewhere in the dome. As the light increased the music swelled and the sky took on the pink tints that precede the sunrise. When full daylight maintained, persons who had witnessed the star show turned to look at each other as if to make sure if they were still on earth. On filing outside it was hard to believe it was still night after the synthetic dawn just experienced.

---oOo---

AERIAL PHOTOGRAPHY BY WASHINGTON NATIONAL GUARD AIRMEN

Hours of flight over the "River-of-no-Return," photographing the famous Salmon river country in northern Idaho, is scheduled to gain recognition in the National Geographic magazine for the 41st Division Aviation, Felts Field, Spokane, Wash.

Salmon City, Idaho, the little early day gold mining town, was bubbling over with excitement recently when a party of representatives from the National Geographic magazine, the United States Geological Survey, United States Forestry Department, and Congressman D. Worth Clark, of Idaho, concentrated there to start their expedition down the Salmon and Snake Rivers to Lewiston, Idaho, where they will land late this month.

Salmon City residents had worked for months interesting the National Geographic magazine publisher in a photographic story of the famous Salmon River - Seven Devils country, probably the most rugged and scenic portion of the United States.

Representing the National Geographic magazine is Maynard Owen Williams, famed photographic explorer, and personal friend of Captain Albert W. Stevens, renowned Air Corps long-distance photographer. Mr. Williams, who wrote the recent series of articles about China, accompanied by photographs, in the National Geographic magazine, wanted aerial photographs.

Through Mr. Howard Flint, Assistant Forest Supervisor for Region No. 1, arrangements were made with the 41st Division Aviation to secure the photographs of the Snake and Salmon river country.

Not only were photographs desired for publication in the National Geographic magazine, but also for geological study by the United States Geological Survey, represented on the expedition by Drs. J.C. Reed and P.J. Shenron, of Washington, D.C.

After a landing for instructions at Salmon City, Lieuts. Claire Hartnett and Ellsworth C. French photographed 85 locations wanted by the party.

It is questionable if any country offers greater general interest than the area photographed. The Thunder Mountain, around which Zane Gray built a story, was an object of great interest.

In some places the scenic Salmon river was found in a narrow gorge between mountain ridges towering 9,000 feet high. Often groups of deer were seen drinking from the cold mountain lakes several thousand feet high.

Spots were located where a geologist could easily go wild with delight studying the many interesting formations.

Salmon river, the "River-of-no-return," gained its name not because it is particularly dangerous, but no barge ever going down the river is able to return, because of the stream current.

The expedition was well quartered on a barge eight feet wide and 30 feet long. Air mattress sleeping bags served as beds, and an abundance of food was taken aboard before the party shoved into the Salmon. The barge is in no way motor-driven, but will be boosted off the rocks by pike and poles.

During the float down stream, the 41st Division Aviation proposed another interesting experiment, that of a daily radio contact with the party. A small Forest Service radio set was established on the barge, and through this the party hopes to establish daily communication with the new military radio sets in the Douglas Observation airplanes of the Division Aviation.

INTERCHANGE OF ARMY AND NAVY AIR FIELDS

A recent announcement by the Navy Department was to the effect that the President of the United States had approved the joint recommendations of the Secretary of War and the Assistant Secretary of the Navy with regard to the interchange of existing Army and Navy air fields. Negotiations which have been under way for the past month have only just been perfected, and the following agreement was reached:

(a) The Army to turn over to the Navy, Rockwell Field; and the Navy at the same time to turn over to the Army, Sunnyvale. This exchange can be made without delay.

(b) The Army to turn over to the Navy that part of Ford Island, Pearl Harbor, T.H., now occupied by the Army, as soon as adequate facilities for the Army units so displaced can be obtained elsewhere.

(c) That metes and bounds acceptable to the Army and Navy of that part of the Anacostia Air Field (old Bolling Field) now occupied and used jointly by the Army and Navy be established, and that the station so defined shall then be turned over to the Navy.

Pending the transfer of these properties between the War and Navy Departments and having in mind the interests of National Defense, the War and Navy Departments recommended that the President issue instructions which would permit immediate action in partial fulfillment of the agreement herein submitted, as follows:

The Army to evacuate that part of North Island in the harbor of San Diego, California, now under the control of the War Department which, with the installations and facilities thereon, will thereafter be used by the Navy; it being understood that this evacuation will not include fixed harbor defense installations now located thereon.

The Navy to evacuate the Naval Air Station, Sunnyvale, Mountain View, California, which with the installations and facilities thereon, will thereafter be used by the Army; it being understood that the lighter than air hangar and operating facilities thereon are not to be dismantled unless such action later is specifically authorized by the President.

The jurisdiction over the areas of North Island and Sunnyvale to be transferred within thirty days, and the complete evacuation to be effected as soon as practicable.

The following is a short survey of Government air activities and facilities at North Island, Ford Island and Anacostia Air Fields:

Army activities transferred to the

Navy:

Anacostia, District of Columbia, land transferred to the Navy in the field now known as Old Bolling Field, which includes an area of 339.04 acres, of which 20.04 acres are now used by the Navy. The 61 buildings on the site include 11 sets of quarters.

San Diego, California, North Island. Land transferred to the Navy now used by the Army Rockwell Field, covers the area of 940.59 acres with a total of 141 buildings including 13 sets of quarters. This will be held by the Navy in addition to the 587 acres now occupied by the Naval Air Station, San Diego.

Pearl Harbor, Hawaii, Ford Island. Land transferred to the Navy now used by the Luke Field (Army) covers 240.78 acres with 116 buildings, including 22 sets of quarters. This will be used by the Navy in addition to the 96 acres used as the Fleet Air Base, Pearl Harbor.

Navy activities transferred to the Army.

Sunnyvale Naval Air Station, Sunnyvale, California, which includes 1000 acres, with 27 buildings, 9 of which are officer quarters.

North Island, San Diego, Calif., separates San Diego Bay from the open roadstead of Coronado Bay. It is flat, and though of sandy soil, forms a natural flying field. Neglecting tide lands, it comprises 1,233 acres; 666 acres are owned by the U.S. Army and form Rockwell Field, and 567 acres, owned by the U.S. Navy, are included in the U.S. Naval Air Station. The Navy's portion, on the side toward San Diego Bay, has a deep water pier for docking Naval vessels. Naval seaplanes land on and take off from the water of San Diego Bay, so that, in effect, there are four landing fields side by side and within a space of four miles: Rockwell Field, the Naval Air Station, San Diego Bay, Lindbergh Field, the latter being a very active civilian field.

North Island was first used for aviation when in 1910 the Curtiss Company started a school there, the first Naval officer student, Lieut. T.G. Ellyson, starting his course in December of that year. During the winter of 1911-1912, the Navy established a temporary flying school on the island, but in the Spring of 1912, moved it to Annapolis, and in June, 1914, to Pensacola. The Army started a school on North Island on privately-owned property on November 1, 1912, and has continued flying operations there ever since that date. A commission appointed by Act of Congress of March 4, 1915, recommended that the Government

purchase North Island for a permanent aviation school, provided it could be obtained at a reasonable cost, and otherwise that it purchase a site on Coronado Heights.

Finally, a bill for the condemnation of the entire tract known as North Island by the United States Government was passed by Congress on July 27, 1917, and the United States Government formally took possession in pursuance of Executive Order of the President of the United States on August 7, 1917.

In the early days of Aviation in the Army, Rockwell Field was used as a training school for young Army officers detailed to duty in the Aviation Section, Signal Corps. The majority of Air Corps officers of field grade who were in the service prior to the outbreak of the World War received their early flying training at this school.

During the War, Rockwell Field was utilized as a school for pursuit flying and aerial gunnery work. The field was named in honor of 2nd Lieut. Louis G. Rockwell, 10th Infantry, who was killed at College Park, Md., on September 28, 1912, in a Wright B type airplane.

Rockwell Field is intimately associated with the early history of Army aviation, for most of the activities prior to the World War were centered in this locality. The history of this field is of absorbing interest and replete with outstanding flying achievements by Army pilots prior to the War as well as subsequent thereto.

---oOo---

VISIT OF LATIN-AMERICAN CIVIL AVIATION OFFICIALS

In connection with the observance of Air Navigation Week, October 14-21, 1935, various aviation activities in the United States will be visited by a delegation of civil aviation officials from Latin America.

The Air Navigation Week Committee, of which Brigadier-General Oscar Westover, Acting Chief of the Air Corps, is a member, has drawn up a tentative program for the visitors, which includes a visit to Mitchel Field on October 18th. On this date, following an inspection of the plant of the Sperry Instrument Co. in Brooklyn, N.Y., the visitors will be flown to Roosevelt Field in a Sikorsky amphibian, where they will be given a luncheon by Mayor La Guardia at the Advertisers Club. They will then visit the Aircraft Show and Exhibition at Roosevelt Field and the Army activities at Mitchel Field. The visitors will return to New York that evening for a dinner by the Radio Corporation of America and will then visit Radio City.

---oOo---

VALUE OF AERIAL PHOTOGRAPHY DEMONSTRATED

Officers of the 41st Division Aviation, Washington National Guard, are going to learn exactly what will be expected of the Air Corps in case an overseas enemy invades the Pacific Northwest, as was figuratively the case in the recent Fourth Army command post exercise at Fort Lewis, Washington, where Major-General Paul B. Malone commanded the Fourth Army.

Lieut.-Colonel Alex Sabiston, of Spokane, Assistant Chief of Staff to General White, of Salem, Oregon, Commander of the 41st Division, was one of the few National Guard officers ordered to participate in the exercise.

Although an infantryman, Colonel Sabiston has a decided Air Corps complex, which prompted him to observe closely the Air Corps tactics in the exercise. It was through the use of aerial photography that Colonel Sabiston relates how he convinced some of the high command that tanks could not be used in a certain area.

"I knew the area was a logged-off area, and would not permit the use of tanks, but the tanks were sent to us," relates Colonel Sabiston. "It just so happened that I had an aerial photograph of the area in question, and when asked what we were doing with the tanks, I replied that they couldn't be used because of the stumps in the terrain. The photograph proved my contention without the slightest argument."

At officers' class in November, Colonel Sabiston will relate, with maps, the activities of the Air Corps in the exercise and how the Air Corps operated with the other arms of the service.

---oOo---

ASSIGNMENT OF ADVANCED FLYING SCHOOL GRADUATES

Officers of the Regular Army, all second lieutenants, who graduated on October 12th from the Advanced Flying School at Kelly Field, San Antonio, Texas, were by Special Orders of the War Department assigned to Air Corps stations, as follows:

To Hamilton Field, San Rafael, Calif.:
Harvey T. Alness, Cav. John B. Cary, C.E.
Herbert M. Baker, Jr., Inf. Jack E. Shuck, CAC
Byron E. Brugge, CAC. Dale O. Smith, Inf.
Paul C. Ashworth, C.E.

To Barksdale Field, Shreveport, La.
Frank C. Norvell, F.A. Wm. H. Wise, Cav.

To Rockwell Field, Coronado, Calif.
George B. Dany, CAC. Wm. M. Gross, F.A.
John deP. T. Hills, Inf. Paul T. Hanley, Inf.
Arno H. Luehman, Inf. Wilson H. Neal, F.A.
Lawson S. Moseley, Jr., CAC John W. White, Inf.
Curtis D. Sluman, CAC. Wm. S. Stone, F.A.
Albert T. Wilson, Jr., Inf. Elvin F. Ligon, Jr. Inf.

Continued on Page 13

V-6876, A.C.

B I O G R A P H I E S

LIEUT.-COLONEL LEWIS H. BRERETON

Lieut.-Colonel Lewis H. Brereton, Air Corps, an officer with a distinguished war record, who is at present on duty as an Instructor at the Command and General Staff School at Fort Leavenworth, Kansas, was born at Pittsburgh, Pa., June 21, 1890. After attending St. John's College, Annapolis, Md., he remained in Maryland's capital for four years longer as a midshipman at the U.S. Naval Academy. Graduating in June, 1911, and being commissioned an Ensign, he resigned on July 5, 1911, and the following month, on the 17th, he accepted an appointment as a second lieutenant in the Coast Artillery Corps. On Sept. 3, 1912, he was detailed to the Aviation Section, Signal Corps, and pursued a course of flying training at the Signal Corps Aviation School at San Diego, Calif., qualifying as a Military Aviator, under the old law, on March 27, 1913. He was relieved from the Signal Corps, at his own request, on July 3, 1913.

Upon his promotion to 1st Lieutenant, July 1, 1916, Col. Brereton was transferred to the 2nd Field Artillery. He was then serving a tour of duty in the Philippines. He was re-detailed to the Aviation Section, Signal Corps, while serving in the Islands and assigned to duty with the 2nd Aero Squadron.

Returning from the Philippines in March, 1917, he was assigned to duty in Washington in the Office of the Chief Signal Officer. For a brief period he was on temporary duty at the Signal Corps Aviation School at Mineola, L.I., New York, undergoing a course of flying training to enable him to qualify as a Junior Military Aviator. He received this rating on June 27, 1917.

In October, 1917, Col. Brereton was relieved from duty in Washington and ordered overseas, serving in Paris, France, with Headquarters, Air Service, Lines of Communication, in the Personnel and Supply Departments. Later he was assigned to the Third Aviation Instruction Center for additional flying training.

Placed in command on March 1, 1918, of the 12th Aero Squadron, one of the first American flying units on the front, he rapidly completed its organization while carrying out extensive operations in both the Toul and Luneville Sectors, during which time he made daily flights over the enemy lines. Ordered to the Marne, he moved his entire unit across France in 48 hours, and took part in the attack at Vaux on July 1st, flying without protection over the battlefield for over two hours in the face of extreme hostile air activity. By his conspicuous personal bravery during the most hazardous missions, he set an example

which proved a splendid inspiration to all who served under his command. Assigned as Chief of Air Service, First Army Corps, in the midst of active operations, Col. Brereton, by his energy, foresight and untiring devotion to duty, rapidly developed an office and unit which attained great success during the second battle of the Marne. Notwithstanding executive duties, he continued to seize every opportunity to perform the most hazardous missions over the enemy lines, and thus maintained the morale of his command during a most trying and critical period.

Taking command of the Corps Observation Wing immediately preceding the St. Mihiel operations, he gave untiringly and with undiminished enthusiasm his knowledge, experience and organizing ability to the development of Corps Air Service organizations throughout the First American Army. On October 26th, he became Operations Officer on the staff of the Chief of Air Service, and continued in this capacity until the cessation of hostilities, when he was appointed Chief of Staff, Headquarters, Air Service, Third Army.

For his conspicuous overseas service, Col. Brereton was awarded the Distinguished Service Cross, also the Croix de Guerre with two palms by the French Government, which further rewarded him by making him an Officer of the Legion of Honor. Other honors conferred upon him were: Commander, 1st Class, Order of Danilo, and Chevalier, Order of Albert of Belgium.

The citation accompanying the award of the Distinguished Service Cross was as follows:

"For extraordinary heroism in action over Thiaucourt, France.

Major Brereton, together with an observer, voluntarily, and pursuant to a request for special mission, left his airdrome, crossed the enemy lines over Lironville, and proceeded to Thiaucourt. In spite of poor visibility, which forced them to fly at a very low altitude and in spite of intense and accurate anti-aircraft fire they maintained their flight along their course and obtained valuable information. Over Thiaucourt they were suddenly attacked by four enemy monoplane Fokkers. Manoeuvring his machine so that his observer could obtain a good field of fire, he entered into combat. His observer's guns becoming jammed, he withdrew until the jam was cleared, when he returned to the combat. His observer then becoming wounded, he coolly made a landing within friendly lines although followed down by the enemy to within twenty-five meters of the ground. By this act he made himself an inspiration and example to all the members of his command."

Upon his return to the United States in February, 1919, Col. Brereton was on duty in the Office of the Director of Air Service, Washington, as Chief of the Operations Division, Training and Operations Group, until December, 1919, when he returned to France for duty as Air Attache at the American Embassy in Paris. In August, 1922, he was assigned to duty at Kelly Field, Texas, where he served as Commanding Officer of the 10th School Group; Assistant Commandant of the Advanced Flying School; Director of Attack Training and as President of the Board on Attack Aviation. On Sept. 16, 1924, he entered upon his duties as instructor at the Air Corps Tactical School at Langley Field, Va. In June of the following year he became commanding officer of the 2nd Bombardment Group at Langley Field, and he continued on this duty until his assignment in August, 1927, as a student at the Command and General Staff School at Fort Leavenworth, Kansas. His graduation from this school in June, 1928, was followed by his assignment to duty as commanding officer of the 88th Observation Squadron at Post Field, Fort Sill, Okla.

Ordered to duty in Panama in August, 1931, Col. Brereton's duties in the Canal Zone were those of Commanding officer of France Field and the 6th Composite Group, Commanding Officer of the Panama Air Depot and Acting Air Officer of the Panama Canal Department. On July 1, 1935, he entered upon his present duty as an instructor at the Command and General Staff School at Fort Leavenworth.

---oOo---

COLONEL JACOB E. FICKEL, AIR CORPS

Colonel Jacob E. Fickel, Air Corps, who now holds the responsible position of Commandant of the Advanced Flying School at Kelly Field, Texas, became interested in aviation early in his career in the Army when in 1910, as a second lieutenant of Infantry, he made flights with the noted pioneer aviators Glenn Curtiss and Charles Willard for the purpose of conducting experiments in firing guns from airplanes. These experiments were the first to be conducted in aviation history, and he was known as the first aerial gunner.

Colonel Fickel was born on January 31, 1883, at Fort Des Moines, Iowa. He was educated in the public schools of Des Moines and Des Moines College. After serving as a cadet in the U.S. Revenue Cutter Service for two years, he enlisted in the Army, serving with Company K, 27th Infantry, as private, corporal, sergeant and first sergeant from March 10, 1904, to February 28, 1907.

Passing the competitive examination for a commission, he was appointed a second lieutenant on February 11, 1907,

and was assigned to the 29th Infantry. He was promoted to 1st Lieutenant, June 1, 1911, and remained with the 29th regiment until his promotion to Captain, July 1, 1916, when he was assigned to the 31st Infantry.

Appointed a Major in the Aviation Section, Signal Corps, November 29, 1917, he was on duty in the Office of the Chief Signal Officer in Washington until December 2nd of that year, when he was ordered to Rockwell Field, San Diego, Calif., for flying instruction. He was promoted to Lieut.-Colonel, August 24, 1918. Upon the completion of his flying training, he received the rating of Junior Military Aviator, August 31, 1918.

From October 22, 1918, to January 28, 1919, Colonel Fickel was on duty as Commanding Officer of Carruthers Field, Fort Worth, Texas. He was then assigned to duty in the Office of the Director of Military Aeronautics, Washington, serving as Assistant Chief of the Finance Division and later as Chief thereof. He was also a member of the Claims Board and the Advisory Board.

Relieved from the Finance Division on September 10, 1920, he remained on duty with the Advisory Board until March 11, 1921, when he was ordered to Portland, Oregon, for duty as Comptroller of the Spruce Production Corporation. In June, 1922, he returned to Washington for duty as Chief of the Supply Division, which position he occupied until April 26, 1924.

After several months of temporary duty at Bolling Field, during the course of which he served as Commanding Officer, he entered upon his duties as student at the Air Corps Tactical School at Langley Field, Va., in October, and when he graduated in June, 1925, he remained at Langley Field in temporary command thereof until August, when he was transferred for duty as student at the Command and General Staff School, Fort Leavenworth, Kansas, emerging therefrom as an honor graduate on June 18, 1926. Returning to Washington, he was on temporary duty in the Office of the Chief of the Air Corps until October, 1926, when he was assigned to the Materiel Division, Wright Field, Dayton, Ohio, as Executive Officer, a position he occupied for the next four years except for a period of four months, April to July, 1930, when he pursued the Special Observers' Course at the Advanced Flying School, Kelly Field. He was promoted to Lieut.-Colonel on May 14, 1930.

Completing the one-year course at the Army War College in June, 1931, Colonel Fickel was again assigned to duty in Washington, this time as Chief of the Buildings and Grounds Division, Office of the Chief of the Air Corps. At various times during his four-year tenure of this position, he was also on temporary duty as Executive Officer. On March 2, 1935, he was transferred to Kelly Field, Texas, for duty as Commandant of the Advanced

Flying School, with the rank of Colonel. He was navigator on the non-stop flight, made on February 20, 1930, from Miami, Fla., to France Field, Panama Canal Zone, a distance of 1140 miles, which was accomplished in a flying time of 11 hours and 20 minutes. The pilots were Captains Albert F. Hegenberger and Ennis C. Whitehead. This was the first time such a flight had been made in a multi-motored airplane, and only once before had it been accomplished in any type of plane.

---oOo---

ACTIVITIES OF NEW JERSEY N.G. AIR CORPS

The 119th Observation Squadron, New Jersey National Guard Air Corps, finished the 1934-1935 Armory and Field Training period without accident of any nature to either personnel or equipment. Safety has been a by-word throughout the year, although more missions of all classes have been flown and additional pilot and observer personnel have been used.

Prior to a most successful and efficient field training period from a squadron standpoint, the officer personnel were given a series of war problem lectures by Captain William J. McKiernan, the Regular Army instructor. Information acquired during this course was particularly helpful to pilots and observers who have not completed the thirty series extension courses during the maneuvers.

The following pilots were commissioned as second lieutenants in the Squadron:

Horace H. Manchester - graduated from the Air Corps Training Center October 1, 1932. Served two years on active duty at Albrook Field and at Mitchel Field.

Anthony J. Ming - Transport pilot, graduate of Boeing School course in instrument flying.

Raymond W. Tucker - Transport pilot, graduate of Boeing School course in instrument flying.

---oOo---

TACTICAL INSPECTION OF 12TH OBS. GROUP

Friday, September 13th, brought to an end the annual Tactical Inspection of the 12th Observation Group, Brooks Field, San Antonio, Texas, culminating in a field problem worked out in cooperation with the Second Division at Fort Sam Houston.

During the period of this inspection, all equipment and personnel were thoroughly covered by Colonel Johnson and his staff. Also, a complete check was made of all paper work. This work included inspection and operation, both indoors and in the field.

Of primary importance was the field problem, during which the 2nd Division acted as both enemy and friendly troops.

Covering a Corps front, the activity consisted of an advance to a strongly defended line, an engagement, a position by the invading army and a counter-attack by defending troops. During these maneuvers, the 12th Observation Group was in constant operation in cooperation with the defending forces, performing missions of reconnaissance, photography and air-ground liaison over the zone of action.

On the whole, the results were satisfactory as to condition of equipment, training of personnel and functioning of the unit in action during engagement.

---oOo---

CADET HARDING WINS PRIZES AS RIFLEMAN

Flying Cadet William W. Harding, stationed at Selfridge Field, Mt. Clemens, Mich., attended the National Rifle Matches recently held at Camp Perry, Ohio. He competed in the small bore and thirty caliber matches and won several cash prizes and two medals. There were about three thousand individuals competing in the matches this year, and the competition was very keen, especially in the "Members Match" and the "Marine Corps Match" in which Cadet Harding competed. He states that, due to the large number of entrants, some of the matches had to be fired in the rain and some in semi darkness. Cadet Harding competed in the rifle matches of the 1932 Olympic Games and made some very high scores at that time.

Having just completed his year of active duty under his cadet status with an Air Corps tactical unit, Cadet Harding has been recommended for a commission as second lieutenant in the Air Reserve and for a tour of extended active duty with an Air Corps tactical unit under his status as a Reserve officer. He graduated from the Advanced Flying School, Kelly Field, Texas, in October, 1934, being appointed a Flying Cadet shortly following his graduation from Stanford University.

---oOo---

ASSIGNMENT OF A.C.A.F.S. GRADUATES (Continued from Page 10)

To Selfridge Field, Mt. Clemens, Mich:

John G. Benner, Inf.

To Mitchel Field, L.I., New York:

John M. Hutchison, Cav.

Jack J. Neely, Inf.

To March Field, Calif.:

Karl W. Bauer, Inf.

Hudson H. Upham, Inf.

To the Philippine Department:

William M. Canterbury, C.A.C.

Richard A. Legg, Inf.

Raymond J. Reeves, Cav.

To Barksdale Field, La.

1st Lieut. Walter C. Sweeney, Jr.
Infantry

ACTIVE DUTY TRAINING BY RESERVE OBSERVATION SQUADRONS
By the Mitchel Field Correspondent

Although thirty Air Corps Reserve officers of the 369th and 861st Observation Squadrons faced the gloomy prospect of having but one primary training plane to fly at the outset of annual active duty training at Mitchel Field this year, events took a happier turn than anyone had anticipated, with the result that both groups got as much or more time in service type ships than they have had in years when the present acute shortage of flying equipment did not exist. The 369th, commanded by Major John M. Hayward, averaged approximately eighteen pilot hours per officer, the 861st about fifteen hours, exceptionally bad weather during the first week of the latter organization's tour accounting for the difference.

When the 369th was called to active duty on August 18th, maneuvers at Pine Camp, New York, were in full swing, and the 97th Observation Squadron, which normally supplies planes for reserve training at Mitchel Field, was busily engaged in the up-state war games. Consequently, it appeared improbable that airplanes would be available for this camp. However, the Second Corps Area Air Reserve Association, by making direct representation to the Office of the Chief of the Air Corps, was rewarded by having six service type airplanes assigned for the period of the camp. As a result, what had threatened to be a famine became a feast of flying time for Major Hayward's Squadron, with one airplane for every two flying officers and perfect weather prevailing throughout the entire active duty period. A gratifying number of missions were carried out in radio navigation reconnaissance, photography, cross-country, etc., and several evenings were devoted to night flying both in the vicinity of Mitchel Field and on observation trips over New York and various parts of Long Island.

The 861st Squadron, which reported for duty on September 1st, was not so lucky as its predecessor either in the number of planes at its disposal or in breaks given it by the weather man. The 97th, back home after the Pine Camp maneuvers, was able to supply only four service type planes to Major Durbin's squadron. However, this organization did make a point of seeing that the Reserve unit's planes were constantly in commission, so that by dividing his command into "A" and "B" flights and flying both mornings and afternoons, Major Durbin managed to provide one airplane for each two pilots of his command, the officers alternating in front and rear cockpits on practically every mission performed.

Except for less than an hour of re-

fresher and check flights on September 3rd, there was no flying at all during the first week of this encampment until the 7th, thanks to a long siege of fog, rain and poor visibility resulting from the Florida's hurricane aftermath. Despite this handicap and the fact that the 861st had more officers than the 369th, nearly as many missions were performed, and the group had four nights of flying - a phase of aviation training in which the Second Corps Area Reserves have been given little opportunity to become proficient.

While on this subject, special tribute should be paid to Captain George S. Stead, of Norwich, New York, for the manner in which he nursed a crippled ship back to its home port after a connecting rod and other parts of the motor let go thirty miles from Mitchel Field on a night reconnaissance mission. Instead of taking to his parachute, as the circumstances easily might have warranted, he decided to stick by his plane and endeavor to reach Mitchel Field, inasmuch as the motor still was delivering partial, if somewhat rough and noisy power. Colonel Walter H. Frank, commanding officer of the post, was on hand when Stead arrived and paid ready tribute to his coolness and skill in saving a sorely needed airplane after he had inspected the ruptured and oil-smeared crankcase of the ship. Captain Akre and Major Durbin also were loud in their praise of the manner in which Captain Stead dealt with the emergency.

Both camps engaged in intensive ground training. Lectures were given by Mr. Stark (of blind-flying fame) and other technical personnel gave lectures and demonstrations on Aviation, Meteorology, Radio-communications and Chemical Warfare. Moving pictures on chemical warfare were shown. Gas mask drill and actual exposure to tear gas while wearing masks constituted an interesting and instructive phase of the ground training. The work on the ground target range consisted of firing the full preliminary and record courses with the 45 calibre automatic and the firing of flexible machine guns. Flexible camera guns were used in lieu of actual machine gunnery on towed targets, and this was considered quite satisfactory.

Inspection tours were made to the Seversky and Grumman airplane factories at Farmingdale.

---oOo---

On October 2nd, Captain Albert F. Hegenberger, Air Corps, was assigned to duty as Squadron Commander of the 30th Bombardment Squadron at Rockwell Field, Coronado, Calif., with the temporary rank of Major.

BROTHERS IN ARMS

"Two brothers on a post is perhaps not so rare," says the News Letter Correspondent from Hamilton Field, Calif., and he then adds: "Three brothers on the same post is perhaps a little harder to find. But when we say that we have three brothers in the same squadron on the same post, we believe that we have achieved the ultimate in kinship for service circles."

Presenting Clarence W., Robert L. and Roger N. Allen, three boys plying the same trade in their profession and rapidly making good, too. All three boys are airplane mechanics in the 31st Bombardment Squadron stationed at Hamilton Field.

Now, what station can tie us or 'push us off the map?'"

Well, according to information just received from the News Letter Correspondent from Chanute Field, Rantoul, Ill., it seems that Hamilton Field is due for a considerable amount of shoving.

The Chanute Field Correspondent submitted the following:

"It was noted in the September 15, 1935, issue of the Air Corps News Letter, under an article headed 'Brothers Galore in Air Corps Organizations,' that although the Station Complement, Brooks Field, Texas, appears to hold the record for the number of brothers serving in one organization, Luke Field, T.H., holds the record for the greatest number of brothers serving at one station. It is believed that the following information will establish a record both for organization and station.

There are seventeen sets of brothers now in the Service at Chanute Field, Rantoul, Ill., assigned to organizations as follows:

- 8 sets - 98th Service Squadron, A.C.
- 4 sets - A.C.T.S. Detachment, Air Corps
- 5 sets - distributed among the other organizations.

Of the eight sets of brothers now serving in the 98th Squadron, two sets consist of three brothers each. In addition to this, all eight sets of brothers in that organization are from the State of Illinois. It is believed that this is a record, not only for Air Corps organizations, but for the entire Army as well.

Following is a list of the brothers now serving at Chanute Field, listed by organizations to which assigned:

- 98th Service Squadron, A.C.
Rasmussen, Evan N.; Louis C.; and Wayne A.
- Kavanaugh, James; William R. and Vincent A.
- Huntsman, George L. and Henry D.
- Pettibon, Ray D. and Dale E.
- Simer, Harold E. and Roscoe L.
- Webster, Ralph and William
- Demounsky, George T. and Frank M.
- Butler, John I. and Walter.

Air Corps Technical School Detachment

Blalock, Walter S. and Paul.
Berry, Clifford T. and William S.
Short, Charles E. and William E.
Johnson, Arthur E. and Ellis A.

Other Organizations

Davis, Harold F., 98th Service Sqdn.
Davis, John A., A.C.T.S. Detachment.
Spees, Herbert G., 98th Service Sqdn.
Spees, Allen R., Det. Q.M. Corps.
Williams, Howard H., 48th Pursuit Sqdn.
Williams, Ray D., A.C.T.S. Detachment.
Silver, Milton D., Det. Q.M. Corps.
Silver, Jack O., 48th Pursuit Squadron
Richardson, William A., 98th Service Sq.
Richardson, Arthur L., A.C.T.S. Detachment

The Air Corps Technical School Detachment also has a father and son serving therein, Staff Sergeant Peter T. Madsen and his son, Private Harold Madsen."

If any Army post can eclipse Chanute Field's record, the News Letter would be glad to hear about it.

---oOo---

STUDENT FLYERS VISIT FORT SILL

Post Field, Fort Sill, Okla., was host to three student flights from the Advanced Flying School, Kelly Field, Texas, during the latter part of September.

The first flight, consisting of 17 Attack planes, arrived on Sept. 22nd, commanded by Captain J.C. Jamison, and departed the following day for Fort Bliss, Texas.

The second flight, consisting of 13 Bombers, commanded by Captain Selzer; 9 Pursuit planes, commanded by Captain Engler, and 16 Observation planes, commanded by Captain McHenry, arrived September 28th, and departed the following day for various destinations. The personnel of this flight totalled 73, but Post Field stretched its housing and messing accommodations and handled the situation in a satisfactory manner.

The third flight, commanded by Captain Smith, and accompanied by Major Knapp, consisted of 12 Pursuit planes, arrived on September 30th and cleared the following day for Fort Bliss.

Post Field recently entertained another visitor. A large and ferocious opossum invaded the hangar and attempted to stow away in one of our speedy O-19's. When persuaded that he was under age for an airplane flight he agreed to become the "Flight Mascot" until he could qualify.

---oOo---

Effective October 2, 1935, Major Hume Peabody, Air Corps, was assigned to duty as Executive and Operations Officer of the 18th Composite Wing, Fort Shafter, T.H., with the temporary rank of Lieut.-Colonel during the period of this assignment. Major Peabody graduated last June from the Army War College, Washington, D.C.

CONGRESSMEN VISIT MARCH FIELD

Defenses of Southern California may soon be strengthened if the stated desires of the sub-committee on War Department expenditures of the House of Representatives Appropriations Committee are enacted into law.

This sub-committee, one of the most important as far as the Army is concerned, visited March Field on September 13th to determine the future appropriations necessary for the development of this strategically located outpost.

Comprising this legislative group were Messrs. Tilman B. Parks, of Arkansas, Chairman; Thomas L. Blanton, of Texas; Thomas S. McMillan, of South Carolina; John F. Dockweiler, of California, and J.C. Pugh, Secretary to the Committee.

Stating that the Committee came to the West Coast to answer to the call of duty to help complete coast defenses, Chairman Parks added: "We want to end war and we intend to prepare for war so that we will never have to fire a hostile shot again."

Welcomed to March Field, Riverside, Calif., with a 17-gun salute, the Congressmen were tendered a 30-plane review of the 17th Attack Group. They witnessed the flying demonstration from the reviewing balcony of post headquarters. Later they were addressed on the defense needs of the Pacific Coast by Brigadier-General Henry H. Arnold, Commanding the First Wing of the General Headquarters Air Force, at the Wing Headquarters building.

Touching on the air base facilities on the West Coast and on the enormity of the defense task facing the First Wing, General Arnold stressed the need of more airplanes of all types on the Pacific Coast.

At the conclusion of General Arnold's lecture, Chairman Parks declared that the needs of the Pacific Coast demand priority in upbuilding America's defenses and added: "We are gratified at the high efficiency of Air Corps personnel, just as we are most deeply concerned over the slow and obsolete plane situation."

A Hollywood Congressman, Representative John Costello, was present with the group as an observer from the House Military Affairs Committee.

---oOo---

On October 2nd, the following-named officers were assigned to duty in the Hawaiian Department with the temporary rank of Captain:

1st Lieuts: Walter A. Fenander, Supply Officer, 75th Service Sqd.; duty as Flight Commanders - Joseph J. Ladd, 23d Bomb.; Emery S. Wetzel, 50th Obs.; Donald D. Arnold and James E. Briggs, 19th Pursuit Sqdns.; duty as Intelligence and Operations Officer, 23rd Bomb. Squadron, Maurice C. Bisson; duty as Engineer and Armament Officer, 18th Pursuit Group, Kingston E. Tibbetts.

EMERGENCY LANDING TRAINING

During the past year there was developed by Colonel Junius W. Jones, Air Corps, and put into training use at Chanute Field, Rantoul, Ill., a system of emergency landing equipment to be used in aiding a pilot to make a successful landing at night when all airplane and ground electric lighting has failed, or under other conditions when it is impossible to see the ground from the air in landing.

The system consists, briefly, of two rows of kerosene torches on the ground, approximately one-quarter of a mile long and one hundred yards apart, resulting in a lighted lane in the direction of the wind, one hundred yards wide and a quarter of a mile long.

The torches or flares themselves are made of one and one-half inch wicks inserted into the closed top of cylindrical cans of capacity of about one gallon, which permits several hours' operation with one filling. The flares are placed fifty yards from each other in each line. To provide for certainty as to the direction of the wind, there is placed on the ground to one side of the lighted lane a Tee pointing into the wind, made up of five of the kerosene flares placed a few yards apart.

The principle of this method of providing a lighted runway is dual in that it shows the pilot in darkness, extreme haze or reasonable fog, where to land, and as he approaches the improvised runway in the indicated direction, the longitudinal relation of the lights give him a range depth perception as he feels for the ground until, when he is about to land, the lights are practically foreshortened into a line with his eye. In addition, the ground flares themselves provide, at night, a certain amount of localized light to aid in depth perception.

During the past year, all pilots on duty at Chanute Field have made two landings each with use of this equipment, no field lights or airplane lights other than running lights being used, and without exception they found the system practical in every way.

The torches can be placed in a relatively few minutes, by use of a crew of two trucks, with a driver and ground man to each, proceeding from the designated starting point, one hundred yards apart, in parallel, and setting the flares at fifty-yard intervals.

Standing operations orders at Chanute Field include provisions for setting out the emergency lighted runway quickly when needed, and it is contemplated that each pilot will make two practice landings annually with this system.

---oOo---

NEW FLYING CLASS AT RANDOLPH FIELD

The new class at the Air Corps Primary Flying School at Randolph Field, near San Antonio, Texas, which entered upon an intensive one-year flying course on October 10th, numbers 146 students, comprising 53 officers of the Regular Army, 9 Air Corps enlisted men one enlisted man from the Coast Artillery Corps, and 83 candidates from civil life.

Three of the student officers are members of the Air Corps, each of whom hold the flying ratings of "Balloon Observer," "Airship Pilot" and "Airplane Observer." The remaining 50 student officers are, except one, all 2nd Lt's, 47 being graduates of the June, 1935, class of the United States Military Academy, and three graduates of previous years. The ten enlisted men and 83 civilians will train under the status of Flying Cadets.

The eight months' course at Randolph Field is divided into the Primary and Basic stages, each of four months' duration. During the first four-month period the students fly the primary training plane, following which they are taught to handle the more delicate controls of the Basic Training plane, which serves as the medium of transition to the regular service type airplanes which the students fly during the last four months of their flying course at the Advanced Flying School at Kelly Field, Texas.

Those student officers who successfully complete the year's course at the Air Corps Training Center are given the rating of "Airplane Pilot". The Air Corps student officers thus add another flying rating to the three they already hold. The other student officers, holding commissions in various branches of the Army, are transferred to the Air Corps. Flying Cadets who make the grade are likewise rated "Airplane Pilots" and they are then assigned to active duty for the period of one year with Air Corps tactical squadrons under their cadet status. At the end of this second year, provided the proficiency they will have attained as military pilots warrants it, they are commissioned second lieutenants in the Air Reserve. If funds are then available, they are given another year of active duty with Air Corps tactical squadrons, this time under their status as Reserve officers.

Among the States represented in the new class, California, as is almost usually the case, leads the field with 14 students, the States of Texas and Minnesota following with 9 and 8, respectively. Among the cities represented, Los Angeles, following her customary practice, has again taken the lead with five local boys, followed by the cities of San Francisco and Detroit with 3 each.

The list of students follows:

AIR CORPS OFFICERS

Major William O. Butler

Captain James F. Powell

Captain R. R. Selway

MEMBERS OF 1935 WEST POINT CLASS

Kenneth P. Berquist, C.E. Crookston, Minn.

Walter J. Bryde, F.A. Newburgh, N. Y.

Willis F. Chapman, Sig. Corps Jackson, Miss.

Edgar A. Clark, F.A. Kansas City, Mo.

Noel M. Cox, Inf. Canton, Miss.

Kenneth I. Curtis, C.A.	Milwaukee, Wis.
Charles J. Daly, Inf.	Pacific Grove, Calif.
Leighton I. Davis, C.E.	Lyndhurst, N. J.
George S. Eckhardt, F.A.	Viroqua, Wis.
Richard E. Ellsworth, Cav.	Erie, Pa.
Arthur A. Fickel, F.A.	Fort Sam Houston, Tex.
Wilhelm C. Freudenthal, Cav.	Worcester, Mass.
Thomas J. Gent, Jr., Inf.	Crestwood, N.Y.
Elmer J. Gibson, F.A.	Shenandoah, Pa.
Pelham D. Glassford, Jr. Cav.	Washington, D. C.
Jack W. Hickman, C.E.	McCook, Neb.
Richard C. Hopkins, Inf.	Topeka, Kans.
Samford W. Horstman, F.A.	St. John, Kans.
John N. Howell, C.A.C.	Margate City, N.J.
Downs E. Ingram, F.A.	McElhattan, Pa.
Carl T. Isham, Inf.	Redlands, Calif.
George M. Jones, Inf.	Memphis, Tenn.
Samuel B. Knowles, Jr., Inf.	Beechhurst, N.J.
Ralph C. Lashley, Inf.	Richmond, Ind.
Albert A. Matyas, Cav.	Brooklyn, N.Y.
Samuel C. Mitchell, Inf.	Westerleigh, N.Y.
Orin H. Moore, Inf.	Winchester, Tenn.
Thomas C. Musgrave, Jr.	Atlanta, Ga.
George E. O'Connor, Inf.	Yonkers, N.Y.
David G. Prestnall, F.A.	Atlanta, Ga.
Jack Roberts, Inf.	New York, N.Y.
Joseph G. Russell, Inf.	Fort Worth, Texas
Maurice M. Simons, Inf.	Ft. Leavenworth, Kans.
Leont Saxton, Inf.	Lynchburg, Va.
Albert J. Shower, C.E.	Madison, Wis.
George R. Smith, Jr., C.E.	Coronado Beach, Fla.
Robert M. Stillman, F.A.	Pueblo, Colo.
Raymond W. Sumi, F.A.	Nashhauk, Minn.
Glenn C. Thompson, Inf.	Roanoke Rapids, N.C.
James W. Totten, C.A.	Fort Omaha, Neb.
Aaron W. Tyer, Inf.	Natchez, Miss.
David G. Wallace, F.A.	Richmond, Va.
James H. Walsh, F.A.	Carbondale, Pa.
Thomas Wildes, Cav.	Brooklyn, N.Y.
James V. Wilson, F.A.	Elwood City, Pa.
John Williamson, Inf.	Brooklyn, N.Y.
Pennock H. Wollaston	West Point, N.Y.

OTHER WEST POINT GRADUATES

Paul E. Ruestow, C.E.	Lynbrook, N.Y.
Ross T. Sampson, Inf.	Ogden, Utah
Herbert B. Thatcher, Inf.	East Orange, N.J.

Of the three above-named officers, Lieut.

Ruestow holds the rank of 1st Lieutenant.

FLYING CADETS - CIVILIANS

Ark.	Henry Gordon Barrett	Little Rock
	Pat Biddleston	Paragould
Calif.	Tony Olivera	Chino
	Gary Wilson	Long Beach
	Michael J. Coffield	Los Angeles
	George E. Biggs	Los Angeles
	Robert C. Orth	Los Angeles
	Charles Allen Simmons	Los Angeles
	Herbert Wangeman	Moorpark
	Edward Bellamy McMillan	San Francisco
	Jillson M. Peattie	San Francisco
	Donald Lawrence Russ	San Francisco
Colo.	Ben Ivan Funk	Denver
	George B. Smith	Denver
	William P. Curtis	Gardner
Ga.	Virgil Homer Kendall, Jr.	College Park
	Marion N. Pharr	Gainesville
	Joseph Farson Manley	Griffin
	Tom Gramling Perkinson	Mariette
	William Guerin Gordon	Savannah
Idaho	Robert Theodore Felton	Lewiston
	Fred L. B. Miller	Moscow
Ill.	Patrick William McIntyre	Chicago

Ind.	Paul C. Schauer	Fort Wayne	Md.	James Osbourn Gray	Hyattsville
	Thornton Kise Myers	Lafayette		59th Service Sqdn. Langley Field, Va.	
Iowa	Billy W. Kent	Braddyville	Mich.	John Mark Ferris	Detroit
	Alban B. Ogden	Des Moines		56th Service Sqdn. Selfridge Field, Mich.	
Md.	Edward T. Klerlein, Jr.	Baltimore	Mo.	Myers R. Eggert	Kirksville
Mass.	Dana Willard Walker	Attleboro		71st Service Sqdn. Barksdale Field, La.	
	George Richard Anderson	Worcester	N.J.	Charles K. Nelson, Jr.	Hammononton
Mich.	Raymond H. Gardner, Jr.	Albion		Boston Airport, E. Boston, Mass.	
	John P. Hackett	Detroit	Ohio	William M. Prather	Wilmington
	Oliver DeMond Loomis	Detroit		90th Attack Sqdn., Barksdale Field, La.	
	George Frederick Ranney	Greenville	Calif.	Alexander P. Couch	El Centro
Minn.	Carl Theodore Renne	Bagley		Rockwell Field, Calif.	
	Jean Koke Lambert	Eveleth		COAST ARTILLERY CORPS	
	Park R. Learned, Jr.	Minneapolis	Calif.	Bourne Adkison	Compton
	Peter M. Riede	Minneapolis		6th C.A., Fort Winfield Scott, Calif.	
	Jack L. Schoch, Jr.	New Ulm		---oOo---	
	Ray J. Dervey	St. Paul			
	Howard W. Gray	St. Paul			
Miss.	Baxter Orr Simpson	Byhalia			
Mo.	James W. Anderson, Jr.	Kansas City			
	Harold W. Ohlke	Kansas City			
Neb.	Ira Mumm	Plattsmouth			
	Guilford R. Montgomery	Signey			
N.J.	Vincent Romano	Bayonne			
	Gordon Chalmers	East Orange			
	Arthur W. Schmitt, Jr.	Madison			
	Charles Ulmer Hale	Newark			
N.M.	Murray F. Clark	Clovis			
N.Y.	Edwin Ferrow Smith	Bath			
	Alexander T. Kardos	New York City			
N.D.	Thomas George Worley	Janestown			
Ohio	Bailey Irving Ozer	Cleveland			
	Paul F. Roth	Cleveland			
	Frederick Walter Hower	Yellow Springs			
Okla.	William J. Kennedy	Oklahoma City			
	James Howett McBride	Stigler			
Ore.	Frederick Greenville Huish	Portland			
	Milton E. Thompson	Portland			
Penna.	Arthur Rustan Anderson	Crafton			
	Charles Joseph Howe	Clairton			
	Harry Philip Leber, Jr.	Philadelphia			
	Edward Morgan Owen	Uniontown			
S.C.	James William Smoak	Yonges Island			
S.D.	Julius Herbert Werle	Parker			
Tenn.	John R. Kilgore	Nashville			
Texas	Robert Allan Bell	Adrian			
	Bruce Hampton Beesley	Bartlett			
	Ray Herbert Fickett	Big Lake			
	Churchill L. Scott, Jr.	Brownwood			
	Boyce F. Heil	San Antonio			
	John Joseph Toudouze	San Antonio			
	Cecil H. Childre	Westaco			
Utah	Charles Hampton Price	Salt Lake City			
Vt.	James Carpenter Averill	Battleboro			
Wash.	Melvin Lee	Ellensburg			
	Willard Gordon Rublin	Ellensburg			
	Loring F. Stetson, Jr.	Lilliwaup			
	Kenneth G. Woodford	Seattle			
	Leonard M. Rohrbough	Tacoma			
Wyo.	Arthur Mills Hutchinson	Cheyenne			

AIR CORPS ENLISTED MEN - PRIVATES

Calif.	Edward N. Geddes	Los Angeles
	Station Complement, Rockwell Field, Cal.	
	Jack F. Todd	Visalia
	47th School Sqdn. Randolph Field, Texas	
Ark.	Aaron J. Foster	Fatmos
	39th Obs. Squadron, Kelly Field, Texas	

88TH OBSERVATION SQDN. MOVES TO HAMILTON FIELD

Thursday, September 26, 1935, witnessed the completion of the transfer of the 88th Observation Squadron, Air Corps (Long Range Amphibian) from Brooks Field, San Antonio, Texas, to its new station at Hamilton Field, San Rafael, Calif. A flight of six planes, led by Captain Robert E. Kelly, departed from Brooks Field on the above-named date via El Paso, Tucson and March Field.

The 38th Observation Squadron, under the command of Major C. E. Giffin, is a part of the 1st Wing, General Headquarters Air Force, at March Field, Calif., under the command of Brigadier General Henry H. Arnold. This Squadron, upon its arrival at Hamilton Field, was equipped with long range amphibian planes required in distance reconnaissance work, much of which will be performed on water.

The transfer of equipment and personnel was effected by truck and automobile. The move completes the reorganization of the Air Corps and solidifies the various wings of the new G.H.Q. Air Force.

The following-named officers transferred with the 88th Observation Squadron to Hamilton Field: Major C.E. Giffin, Captains Raymond Morrison, Richard I. Dugan, R.H. Kelly, Lieutenants, Air Reserve, Albert L. Palmer, William W. Pannia, Arthur J. Pierce and George E. Pierce.

Flying Cadets transferred to Hamilton Field were Arthur V. Jones, Jr., Frank N. Nightingale, William Q.Q. Rankin, Jess A. Smith, Lloyd A. Walker, Jr.

The enlisted men making the journey to their new station numbered 53, comprising 2 Master Sergeants; 2 Technical Sergeants; one First Sergeant; 8 Staff Sergeants; 2 Sergeants, AM, 1st Class; 1 Sergeant, A.M., 2nd Class; 4 Sergeants; 1 Corporal, A.M., 1st Class; 2 Corporals, A.M., 2nd Class; 4 Corporals; 9 Privates, 1st Class; 2 Privates, A.M., 2nd Class, and 15 Privates.

---oOo---

WAR DEPARTMENT ORDERS

Changes of Station: To Office Chief of the Air Corps, Washington: Lieut.-Colonel Harvey S. Burwell from duty with GHQ Air Force, Langley Field, Va., to duty as GHQ Air Force Personnel Liaison Officer.

To Rockwell Field, Calif.: Captain Thomas W. Steed, 4rd Pursuit Squadron. Relieved from temporary rank upon departure from the Philippines.

To Hamilton Field, Calif.: 1st Lieut. Leslie O. Peterson, upon completion of tour of duty in Philippines.

To Maxwell Field, Ala.: Captain John W. Monahan from duty as Assistant Military Attache for Air, London, Eng.

To London, Eng.: Lieut.-Colonel Martin F. Scanlon from duty with Station Complement, Bolling Field, D.C., to duty as Assistant Military Attache for Air, American Embassy.

To Hensley Field, Dallas, Texas: 1st Lt. Russell H. Griffith, from Hawaiian Dept., for duty with Organized Reserves. Previous orders in his case revoked.

To Chanute Field, Ill.: Captain Hansford W. Pennington, Panama Canal Dept. Previous orders revoked.

RETIREMENT: Colonel Ira Longanecker, Nov. 30, 1935, upon his own application after more than 33 years' service.

The duty assignments of the following-named Air Corps officers, holding temporary increased rank, were changed, these officers, however, still retaining their temporary rank:

Major Lionel H. Dunlap from duty with 66th Service Squadron to Commanding Officer, 28th Bombardment Squadron, Nichols Field, P.I.

Major Westside T. Larson from duty with 32d Bombardment Squadron, Rockwell Field, Calif., to duty as Intelligence and Operations Officer, 19th Bombardment Group, Rockwell Field.

Major James L. Grisham, from duty with 30th Bombardment Squadron, Rockwell Field, to duty as Commanding Officer, 32nd Bombardment Squadron, Rockwell Field.

Captain Harvey F. Dyer, from assignment with 26th Attack Squadron, Wheeler Field, T.H., to duty as Adjutant, Hawaiian Air Depot, Luke Field, T.H.

Captain John E. Bodle from duty with 18th Pursuit Group, Wheeler Field, T.H., to duty as Flight Commander.

Captain Bryant L. Boatner, from duty as Flight Commander, 6th Pursuit Squadron, Wheeler Field, T.H., to duty as Intelligence and Operations Officer of that Squadron.

Captain Russell Keillor relieved from assignment as Flight Commander, 19th Pursuit Squadron, Wheeler Field, to duty as Intelligence and Operations Officer, 19th Pursuit Squadron.

Major Thomas W. Hastey was relieved from assignment and duty with the 28th Bombardment Squadron at Nichols Field, P.I.

Major Arnold H. Rich relieved from assignment, duty and temporary rank as Commanding Officer, 84th Service Sqdn., Maxwell Field.

NATIONAL GUARD AIRMEN IN CONVENTION

Five Douglas Observation airplanes from the 41st Division Aviation, Washington National Guard, Felts Field, Spokane, Wash., with a complete compliment of officers and enlisted men, will be flown on an air navigation flight to Santa Fe, New Mexico, Incidentally, while there, they will attend the annual convention of the National Guard Association, October 24-26, 1935. In the flight will be Brigadier General Carlos Pennington, who commanded the Infantry troops during strike duty in Tacoma, Wash., last summer.

Local officers of the Washington National Guard Association are considering extending an invitation to the National Association to hold its 1936 convention in Spokane.

Officers of the 41st Division Aviation have pointed out that their organization has all the facilities necessary to care for Air Corps groups attending the convention, and that sufficient hotel and convention hall accommodations are available.

With the establishment of the Northern Transcontinental Airway from the Twin Cities to Seattle, Spokane is on airways from all parts of the United States.

---oOo---

NECESSITY THE MOTHER OF INVENTION

A Navy pilot in an observation seaplane made a forced landing at sea, due to a broken gas line, forty miles or so from the nearest ship. The question was - What to do? A little rummaging around disclosed a first aid kit with a hollow tourniquet, plenty of adhesive tape, and elsewhere, a roll of safety wire. A piece of the tourniquet was cut off and slipped over each end of the broken line. Adhesive tape was applied, and the whole bound with safety wire. The engine was started and the airplane flown safely back to the ship.

---oOo---

AIR DEMONSTRATION AT FORT LEAVENWORTH, KANS.

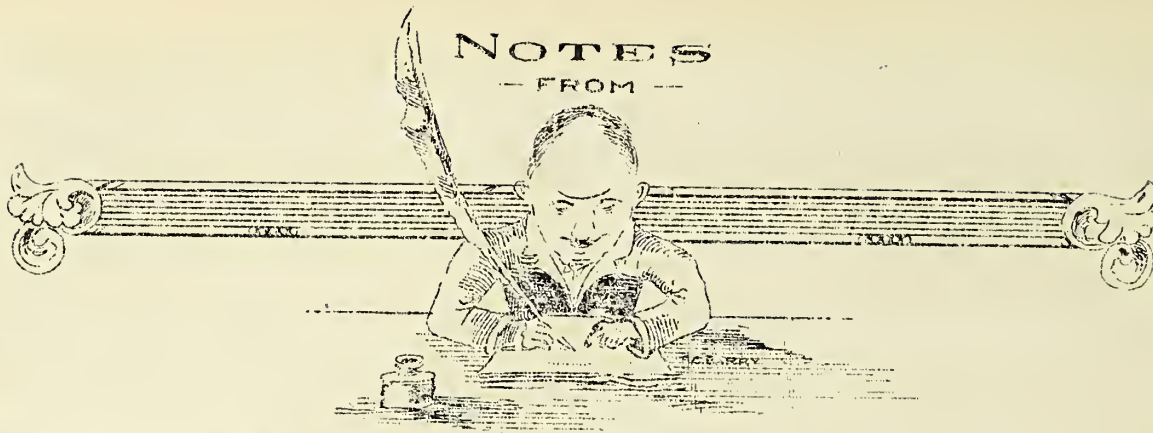
An Air Demonstration was scheduled to be held at Fort Leavenworth, Kansas, on October 12th, with Air Corps personnel from Barksdale, Langley, March and Hamilton Fields, and from Fort Leavenworth, participating, utilizing 17 Type A-12 Attack, 21 P-26 and 3 Transport planes from Barksdale Field, 13 B-6 Bombardment planes from Langley Field, 3 Martin Bombers from Hamilton Field and 3 O-19 Observation planes from Fort Leavenworth.

Events on the program were to be the spraying of Infantry troops in column; Pursuit dive bombing; Attack bombing against a dispersed Infantry battalion; Attack demonstration of parachute bombs; Pursuit attack against an Observation element; Demonstration of Bombardment tactical formations; Attack of Bombardment squadron by Pursuit squadron; Attack of modern fast Bombers by Pursuit squadron; High altitude bombing, 8,000 to 10,000 feet, by a Bombardment squadron; Demonstration of Pursuit formation and maneuverability. Personnel participating: 63 officers, 13 Flying Cadets, necessary complement of enlisted men, and 13 officers (observers).

V-6876, A.C.

NOTES

— FROM —



AIR CORPS FIELDS

Hawaiian Air Depot, Luke Field, T.H., Sept. 18

Remodeling of the Main Warehouse to increase the storage space is nearing completion. Work is now beginning on the other storage hangar, commonly called the seaplane hangar. This hangar, which has been used for storage of metals and miscellaneous bulky supplies, is in very poor condition, having one side open which has been enclosed for a number of years by using engine boxes. These engine boxes will be replaced by sliding doors. A mezzanine floor will be constructed which will provide much needed additional storage space.

It is doubtful if any of the mainland depots appreciate the difficulties encountered in receiving supplies at the Hawaiian Air Depot.

When a large transport shipment is received at the Pier at Fort Armstrong, all of the available trucks of the Post Quartermaster at Luke Field are sent to the Pier daily to transport these supplies to the Hawaiian Air Depot.

Since hourly ferry service is available, the loading and unloading of supplies must be carried on by schedule. It requires from twenty to thirty minutes to drive the trucks from Fort Armstrong to the Coal Dock at Pearl Harbor, where they are driven on the ferry. It then requires the ferry fifteen minutes to make the trip between the Coal Dock and Luke Field. Bulky supplies are loaded on a large Quartermaster barge at the Pier at Fort Armstrong, and are brought to the dock on Ford Island. In order to cooperate with the Quartermaster and release their barge as soon as possible, it is necessary to work overtime and concentrate all help in unloading this barge. This work is usually completed within a week or ten days after the transport has docked. In the meantime, the work of uncrating these supplies is progressing in the Shipping and Receiving Department. Due to the time elapsing between transports, there are always a number of critical items for which the various Departments are waiting. Every effort is made to locate such items, and priority is given to their uncrating. This condition, however, is being greatly improved due to more careful study of requirements. Very close cooperation exists between the Depot

Supply and Engineering Departments at this Depot, and personnel from the two Departments are estimating requirements for parts and other supplies eighteen months in advance. The Quartermaster also cooperates and is often able to locate items on the floor and give them priority. It can readily be seen from the above that the Supply Department of this Depot is a very busy place when a transport arrives.

Captain Edwin R. Page, Depot Commander, has received orders to report to the Materiel Division at Wright Field, leaving this Department probably during the latter part of October. Captain Charles E. Branshaw is expected to arrive at this Depot on or about October 23rd, at which time he will assume the duties of Depot Engineering Officer.

Captain Oscar F. Carlson, who has been Chief Inspector, Test Pilot, and Assistant Engineering Officer, is under orders to proceed to Chamute Field, sailing from this Department September 30th.

This Depot follows with much interest the activities of Sir Charles Kingsford-Smith, Australia's trans-oceanic flier, who passed through Honolulu recently and who was the guest of Captain Edwin R. Page during his stopover here.

Luke Field, T.H., Sept. 17.

Captain H.G. Montgomery, flight leader of "C" Flight, 50th Observation Squadron, departed on the Lurline for Rockwell Field on Sept. 14th. He was formerly a member of the 23rd Bombardment Squadron, during which time he filled the position of Group Communications Officer. A number of friends of Captain Montgomery declared a holiday in order to wish him "Bon Voyage," "Aloha" and to remind him "not to forget to write."

Lieut. C.W. Phillips is upholding the honor of the 50th Obs. Squadron and thereby heaping credit on himself as a member of the Luke Field Pistol Team. In the recent matches held in Punchbowl, this team won third place, and one of its members, Lieut. Densford, again won the Island Championship, an honor that is fast becoming a habit with him. Glancing back through the records of this organization and scratching Nature's "Crowning Glory" in order to arouse a

few memories of bygone days, we find that Lieut. Densford was once a member of the 50th Observation Squadron, a fact that may have little or no bearing on his shooting ability - but you know how it is: "I once shook the hand of the hand that shook the hand of the Champ."

If you should see a 44" chest on a man of normal size and spend some moments in quiet repose contemplating this unusual abnormality, remember that on August 27th Lieut. Phillips became a father of twins, a boy and a girl. The Armament Department put on a display and tacked a sign close by with these words: "Congratulations to our No. 2 boss, the Armament Department does things in a big way."

Captain Sams, 50th Obs. Squadron Operations Officer, and Lieut. Fowler, Engineering Officer, recently departed for Wheeler Field to continue the study of Celestial Navigation, a course that will continue over a period of two months.

The athletic program of the 23rd Squadron while encamped at Bellows Field included a baseball series between the officers' team, the N.C.O.'s team and the privates' team. The N.C.O.'s, winners of last year's series, were eliminated early in the series. Between the officers and the privates, each won one game, and in the play-off the Privates won by a safe margin.

Lieuts. D.A. Cooper and W.R. Boutz, recent arrivals at this station, were assigned to the 4th Squadron. Lieut. Cooper, who recently completed the Communications Course at Fort Monmouth, N.J., has appointed Communications Officer vice Lieut. Charles Densford who, after two and one-half years in the Islands, left for duty at Kelly Field. Lieut. Boutz was assigned as Squadron Mess Officer.

Albrook Field, Panama Canal Zone, Sept. 18.

Majors W.B. Gates and Burton M. Hovey took leave and returned to the States on the transport CHATEAU THIERRY, sailing from Cristobal on September 7th. They will return to the Canal Zone on this transport's next voyage south.

Major Frank O'D. Hunter and Captain David D. Graves took leave on September 16th for a hunting trip in Chile and the Argentine. They expect to return with many valuable trophies of the trip.

Capt. J.H. Wallace established a new course record for Fort Amador Golf Club when he shot the 18 holes in two strokes under par. This card was one stroke better than the old mark of 67, held by the course professional. Captain Wallace was practicing for the second set of the Atwater-Kent matches when he made the record. Captain R.S. Israel and H.M. Stout and A.C. Medinger were playing with him. The Championship card below shows that Captain Wallace shot twelve pars, four birdies, and two one-over-pars.

	The Card: - Out									
Par	4	5	3	4	5	4	3	5	3	- 36
Wallace	4	4	3	4	4	4	3	5	3	- 34

	The Card - In									
Par	4	3	3	3	3	4	4	5	3	- 32
Wallace	3	2	3	4	3	4	4	5	4	- 32

Hamilton Field, Calif., Sept. 30th.

Operations in the 31st Squadron during the next few weeks will include Camera Obscura, until all pilots are qualified for bombing, over the Hamilton Field range until we run short of bombing material. At the present time, due to the activity of the Special Demonstration Squadron which is preparing for a trip to Fort Leavenworth, the range is somewhat congested, but it is hoped that in the near future this squadron will be in a position to put a few holes in the bullseye. The new type camera obscura hut, which is being used by this post for the purpose of service test, is proving successful, with the exception of the fact that during hot weather the operator swelters under the sheet metal.

Six Reserve officers stationed here will revert to inactive status on October 15th, viz: 2nd Lieuts. Noble O. Sprunger, 11th Squadron; Nathan P. Searles, 9th Squadron; Joseph P. Bohl, Duncan J. Powers, Benton R. Baldwin and James E. Roberts of the 31st Bombardment Squadron. Information gleaned from these officers during casual conversation indicates that in their civilian pursuits the accent will be on pursuit.

Effective October 5th, Major Lewis R.P. Reese was ordered to his home to await retirement.

Capt. Wilbur Erickson was appointed Adjutant of Hamilton Field, vice Captain Oliver K. Robbins, relieved Sept. 27th.

Second Lieut. J.E. Roberts, Air Reserve, recently returned from a trip to Eureka, Calif., in an effort to swell the ranks of the Regular Army via the recruiting method.

POEM BY RESERVE OFFICER

The time has come, my job expires,

I gotta find a guy what hires,

If I don't move my lazy feet,

Ten to one my kids won't eat.

If Huey'd lived, I'd get my share,

From all the guys what has to spare,

While it lasts this racket's swell,

But now it's gone, so what the _____.

The second of a series of informal smokers was held at the Post Hospital at Hamilton Field on September 20th. The guest of honor was Lieut.-Colonel C.L. Tinker, post commander. Other officers present were Lieut.-Colonel G.I. Jones, Major F.L. Pratt, Capt. J.P. Smith and Lieut. J.C. Hampson, all of the hospital staff. Other members of the Commanding Officer's staff present were Major W.B. Hough, Captain Oliver K. Robbins, Air Corps, and Capt. J.O. Roady, Quartermaster Corps. Also attending, as guests of the Post Surgeon, were Lieut.-Colonel C.C. McCornack, Medical Corps, a distinguished Medical Corps officer, who is enroute to his new station at the Letterman Gen-

eral Hospital, and Major H.A. Bishop, Medical Corps, personal physician to the Secretary of War.

Staff Sgt. Harry Kramer, Post Sergeant Major, and Corp. J.J. Moran, of the Public Relations Staff, were present as the invited guests of the enlisted staff of the hospital.

The dinner served was comparable to those prepared by the finest chefs and served by the best hostesses in this area. "Plenty of everything for everybody" was the slogan, under the attentive eyes of Sergeant Martin and a corps of able assistants. At this time may we pay tribute to those "kitchen martyrs" who prepared and served the meal.

During the dinner, several musical selections were rendered by members of the Lou Emmel Artists Troupe, the numbers ranging from the classical Quartette from Rigoletto to the latest popular numbers. After the banquet, those present were interested spectators to the efforts of one double dancing team and several solo dancers. The artists interpreted classical, aesthetic, Moorish and Oriental numbers. These advocates of the terpsichorean art were roundly applauded. As a surprise novelty number, a team composed of Privates Wm. Nitz of the Medical Department, and Ed Dayton, of the Station Complement, known as the "cow-boy soldiers," played several excellent Hawaiian numbers on the Spanish steel and Hawaiian guitars.

Approximately 75 people attended, all departing well satisfied, voting the affair a huge success and offering congratulations to Colonel Jones and Sergeant Martin upon producing one of the major social events of the season.

Initiating the season's boxing program at the field, the local leather pushers presented a fast card under the guidance of Chaplain Stanley J. Reilly before a crowd estimated at 1250 people in the gladiatoral arena, for which purpose a hangar was converted. Some fast action was seen in all of the events. A feature of the occasion was a wrestling match between Art Williams of the 69th Service Sqdn. and Floyd Smith, of the 7th Bomb. Group Hqrs., the latter winning in two straight falls in 12 minutes.

Just prior to the main event, a few words of welcome and appreciation were spoken by Lieut. Colonel C.L. Tinker, Commanding Officer. Chaplain Reilly announced the entire show. Private Chausse, of the Station Complement, is the squad's trainer and instructor.

Clark Field, P.I., Sept. 5th.

Pilots of the 3rd Pursuit Squadron completed their inspection trips to Mindanao for the purpose of inspecting landing fields and terrain. Their itineraries were as follows: Major Ford and Captain Davies to Iloilo, Zamboanga, Jolo, Del Monte; Captains Steed, Wurtsmith, Lieuts. Morgan, Bowman, Morse, Parker, Barr and Zimmerman to Iloilo, Zamboanga, Del Monte, and Tacloban. The "Price" family" in Tacloban entertained the flights in each case.

San Antonio Air Depot, Duncan Field, Texas.

Congressmen Tilman D. Parks, of Arkansas; Thomas S. McMillan, of South Carolina, and John F. Dockweiler, of California, with Mr. J.C. Pugh, Secretary of the Sub Committee on Military Appropriations, House Appropriations Committee, visited the Depot on September 23d in the course of their inspection of Army activities in San Antonio and vicinity, on their recent tour of the United States to investigate urgent construction and other needs of the Army. They were accompanied on this visit by Congressman Maury Maverick, of this district; Brigadier-General A.T. Ovenshine, commander of Fort Sam Houston, and other civil and military officials.

Colonel J. W. Jones, Commanding Officer of Chanute Field, Rantoul, Ill., and Captain G.W. Goddard, of that station, flying an O-1E, were visitors here October 1-2, to secure and ferry a BT-2A back to Chanute Field.

Lieut.-Colonel E.A. Lohman, with Cadet Moomaw as passenger and Captain N.B. Forrest with Cadet D.B. Kuhn as passenger, flew in from March Field, Calif., October 4th, in two BT-2B1's, to secure two PT-3's to ferry back to March Field.

Lieut. R.T. Aldworth, U.S.A., Retired, Superintendent of the Municipal Airport, Newark, N.J., and former noted pilot of the Air Corps, while on a brief visit to San Antonio, was a caller at the Depot on Sept. 30th, greeting old friends and talking over old times when he was on duty here.

In connection with the annual National Fire Prevention Week, October 6th to 12th, a Board of Officers was again appointed to make a thorough fire prevention inspection of the station during that period, and the Depot is planning on the same wholehearted observance of the week as it has manifested in past years.

Selfridge Field, Mt. Clemens, Mich., Oct. 1st.

A nine-hole golf course at the field was officially opened the week end of Sept. 21-22 with a dinner dance at the Officers' Club on Saturday evening, and the opening of the course to golf enthusiasts of the post on Sunday. A Kickers Tournament was started, but the arrival of Colonel Weaver and his party on Sunday afternoon for the GHQ inspection caused postponement of some of the matches, and the winner has not yet been decided.

The Softball League of Selfridge was composed this season of teams from the 17th, 27th and 94th Pursuit Squadrons, the 56th and 57th Service Squadrons; the Station Complement; Detachment, Quartermaster Corps; 1st Pursuit Group Hqrs. Detachment, and Detachment, Medical Dept. The season was divided into two rounds. The Station Complement won the Championship, taking 11 out of 12 games the first half of the season and 18 out of 20 games in the second half. The championship was decided in the last three games between the 56th and the Complement, the latter team winning two out of the three games.

Brooks Field, San Antonio, Texas, October 5.

Lieut. L.B. Hillsinger piloted the plane transporting Congressman J. Buell Snyder, of Pennsylvania, on his return trip to Washington recently. The latter was a member of the Congressional Committee on Appropriations which made an inspection of all military posts in the vicinity of San Antonio at that time.

Lieut. Francis L. Rivard, Air Reserve, also of Brooks Field, flew to Syracuse, N.Y., on September 23rd, accompanied by Colonel F.H. Malven, who was formerly stationed at Fort Sam Houston.

---oOo---

LIBRARY NOTES

Some of the more interesting Books and Documents recently added to Air Corps Library

A 00 U.S. 56. Our changing national defense, by General William C. Rivers, 24p. 1935. A public hearing on the invitation of the House Committee on Military Affairs, April 4, 1935. Takes up the defense of our West Coast, the tragedy of our small regular army, out-worn promotion system, Navy promotion, the War Department, Military Academy, and the advocacy of a Department of National Defense.

C 20 4. Who's in the Army now? Strategic map. 20 p. Sept. 1935. "Fortune Magazine" gives its impression of the Army.

C 70 U.S. 29. Bringing war home, by Col. Herbert A. Dargue, 3p. June, 1935. Colonel Dargue in an article in "Capital Business" tells what might happen to any city from enemy aircraft.

629.13 Un3us No. 936. Air Corps training. 4p. Sept. 16, 1935. (Air Corps Stencil U-936, A.C.)

629.13 Un3us No. 1064. The Air Corps Training Center, 6p. Sept. 16, 1935. Air Corps Stencil U-1064, A.C.)

629.13 Un3us No. 1144. Instrument Flying, 13p. June 12, 1935. (Air Corps Stencil U-1144, A.C.)

387.7 D66. Financial policies in the aviation industry, by Paul A. Dodd, 234p. 1933. A thesis in economics presented to the faculty of the Graduate School of the University of Pennsylvania.

623.74 G79 No. 2 1Ed. Anti-gas precautions and first aid for air raid casualties. 110p. 1935. Great Britain Home Office Air Raid precautions Handbook No. 2.

629.144 M 58. Guide aerien France 1935-36. Published by Michelin. 40p. 1935. A very handy aeronautical guide book of France.

Post Field, Fort Sill, Okla., Sept. 26th.

On Wednesday, Sept. 25th, the 1st Balloon Squadron, A.C., participated in its Organization Day ceremony and festivities. The entire day was given over to the ceremony and festivities. At 9:00 a.m., Captain W.C. Farnum, commanding officer, read and commented on the organization's past history, a brief resume of which follows: Organized at Omaha, Neb., Sept. 25, 1917; served overseas from Dec. 1917, to Aug., 1919; had four balloons burned; credited with destruction by machine gun fire of two enemy planes; flew first balloon in German territory at Niederberg; rendered inactive July, 1922; reconstituted May, 1929; and has served since that date at Fort Sill.

After this ceremony a tug-of-war was voted to decide the hemp-pulling championship of the world, and two suitable teams of 15 men each were picked.

Leo J. Hackman, the newest "John" in the outfit, was the lucky man at a \$5.00 cash award in the morning, winning it when a wheel with all the names on it was spun and shot at by Capt. Farnum. Hack's name was well enough punctured to remove all doubt or argument as to who was entitled to the award.

Congregating in the new Transportation Hangar because inclement weather ruined previous plans of having the picnic at Mineral Wells, a well prepared and appropriately served "Dutch Luncheon" was enjoyed, during which we were serenaded by "Louies Hungry Seven" from the 1st F.A. Band.

Entering into a program of sports, the first event, a foot race, was won by Curly Dawson over Curly Welch. One was named Curly for his abundant curly locks and the other because not only his lack thereof but hair as well.

The next event, a three-legged race, was won at a trot by the two "Willies," Duke and Sutton. Capt. Farnum and our well proportioned "Top Kick," Johnny Hallam were so far outclassed that they never left the post, much to the chagrin of the spectators, all of whom wanted to see a most certain spill.

The next event, a Sack Race, was won by Shorty Abbott without much competition.

Giving the ladies a chance to strut their stuff by having a Prize Waltz, Sheiky Mike Michalik and his Commanding General (wife to the uninformed) won by a fluke. Mike had so much vaseline on his hair that it dazzled the judges so they couldn't see the other competitors. The \$3. prize award Mrs. Michalik pocketed quickly and handily to keep her spouse from entering any "rummy" games.

Next, a tug-of-war outside in the mud, the rain having abated, was won by Wilson and his stooges, in best two out of three pulls.

A barnyard golf game (horseshoes) was won by our rotound Johnny Hallam and diminutive Johnny Seaburg mainly because they threw more ringers than anyone else.

A big treat of the afternoon, a 7-inning soft ball game, was won by Micky Murray's "Fighting Irish" team over the one managed by Frankie Clark. The game was abbreviated because the substitutes gave out due to the rapidly mounting casualty list. The score was

V-6876, A.C.

quite close? 16 to 4.

Three boxing bouts were next framed. In the first, Arky Lindgren was the winner over Kid Lammers. The second bout saw One Punch Leonard win a close decision from K.O. Decker. The last bout saw two champions, Duke, former light-heavyweight champ of Fort Sill, meet Iron Man Howard, anyweight champ of any eating contest created, pork chops a specialty. Duke won by a huge margin.

We then repaired to the Transportation Hangar and made short work of the remaining refreshments, after which all wended their respective ways home to keep the fond memory of a very enjoyable afternoon in their minds, already planning for our next picnic, to make it larger and better, and for some, to gain revenge.

We were sorry that Major Koenig was on leave and could not attend.

Cartons of cigarettes were given all winners.

TECHNICAL INFORMATION AND ENGINEERING NEWS

Air Corps Materiel Division

Testing of New Aircraft Engines.

Before an aircraft engine is approved for installation in Air Corps airplanes, it must satisfactorily complete a 150-hour, or type test. If a new model of a previously approved engine is brought out, the new model must also undergo this test before it becomes an approved engine. The following engines have recently completed the type test and are approved for service use at the ratings shown:

Curtiss Conqueror V-1570-61 - 700 h.p. at 2450 r.p.m. at sea level.

Pratt & Whitney R-1690-17 - 750 h.p. at 2250 r.p.m. at 7000 feet, normal rating, and 825 h.p. at 2500 r.p.m. military rating.

Pratt & Whitney Twin Wasp Junior R-1535-11 750 h.p. at 2500 r.p.m. at sea level.

Pratt & Whitney Twin Wasp Junior R-1535-7 725 h.p. at 2500 r.p.m. at 4000 feet.

Pratt & Whitney Junior R-985-1 - 400 h.p. at 2200 r.p.m. at sea level.

Main Carburetor Jet Replacement.

Reports received in the Materiel Division indicated scattering misses on either or both switches and in both tanks and the blowing of valves in the V-1150 engines. Thorough laboratory tests on the Type MA-Y5F carburetors have indicated this condition to be due to the needle-valve ball check being held on its seat by the pressure difference of the fuel flowing through the by-pass holes. As it is impossible to make alterations to the needle-valve seat assembly to overcome this difficulty and, inasmuch as the use of a richer main metering jet does overcome this trouble, main jet size No. 43 is being replaced with jet No. 42, and page 62, Technical Order 02-1-18 is being revised accordingly. For identification purposes, No. SLA-12145, Issue No. 2 will be changed to SLA-12145, Issue No. 3 on the specification or name plate installed on the carburetors when this change is accomplished.

Photographic Laboratories - Mitchel Field

An Engineering Section Memorandum Report, Serial No. P-54-299, was prepared September 25, 1935, to report on changes recommended with photographic laboratories at the 8th and 14th Photographic Sections, Mitchel Field, Long Island, New York, as a result of investigation by a representative of the Materiel Division.

Type B-4 Photographic Print Dryer.

Distribution and questionnaire has been furnished for service test of the Type B-4 dryer for the natural air drying of photographic prints. This dryer is provided with 17 trays, approximately 4 feet by 6 feet, which will hold approximately five hundred 8 by 10 contact prints or two hundred 15 $\frac{1}{4}$ by 16-3/8-inch transformed T-3A prints, and upon which the prints are laid during the drying process. An air compartment is provided on each side of the dryer, to which is attached a blower for the purpose of producing a circulation of air between each tray.

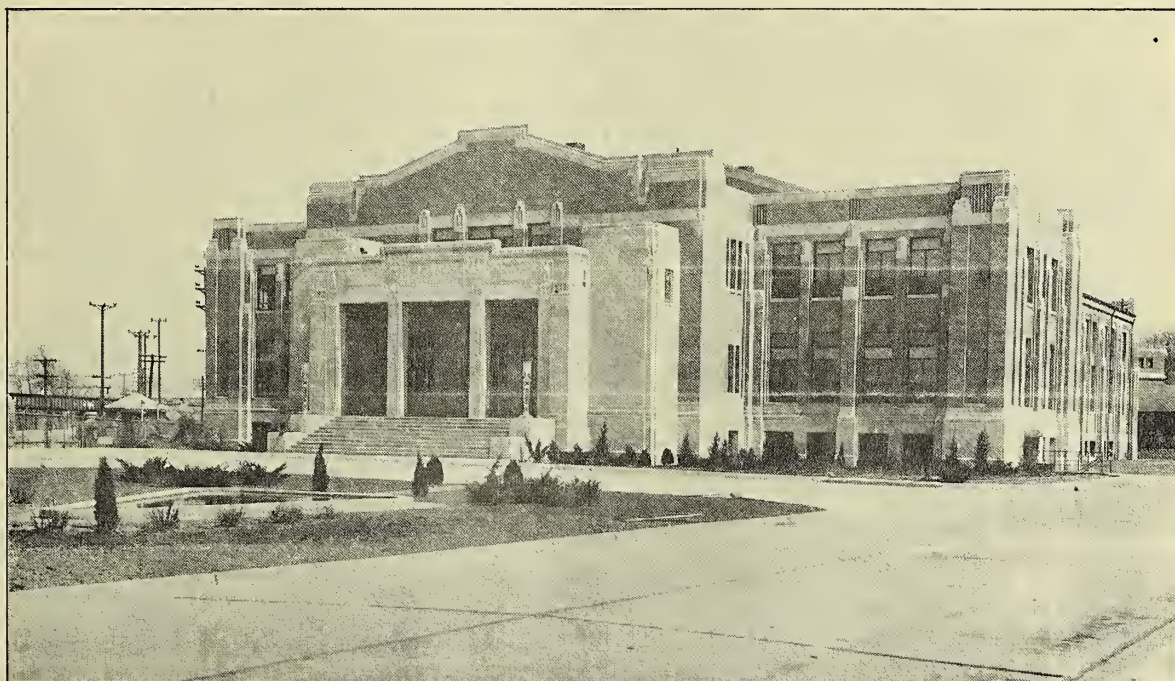


NEWS

LETTER

Issued by the Chief of the Air Corps
Washington, D. C.

November 1, 1935.



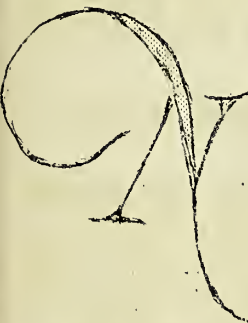
Army Aeronautical Museum, Wright Field

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

ARMY AERONAUTICAL MUSEUM AND TECHNICAL DATA BUILDING

By Marguerite Jacobs Heron



EW STRUCTURES appear periodically about a growing Air Corps field. During the past year there has been erected at Wright Field, Dayton, Ohio, a building of dignity and beauty for the housing of the Army Aeronautical Museum and the technical

Data Branch, the latter being responsible for the editorial, library, ground photographic, moving picture, statistical, publication, and public relations functions of the Materiel Division.

Constructed of stone and buff brick, there is a hint of early Egyptian in the design of pillars and facade, although window arrangements and general construction are thoroughly modern. The war eagle, or conventional thunder bird, the Air Corps wings crossed by a propeller, the conventionalized wings with shield are used effectively in the decoration of facade and cornices.

Just inside the building is a foyer leading into the main rotunda. Color combinations, architectural design, and the materials employed conspire to give the immediate impression of an impressive, dignified, and purposeful interior. The floor is of terrazzo with brass inlays, and varying shades of color are used to accomplish effective designs. The four points of the compass are marked in circular effect beneath the dome which centers over the rotunda and extends the full two stories of the building in height.

Walls are of walnut veneer, with doors and frames of aluminum worked in appropriate patterns. All lighting fixtures are of aluminum, those on the side walls being conventionalized bombs about 5 feet in height, nose down, tails and finials to the top, with frosted glass sides. The grays touched by deep green bands of the floors, silver tones of doors and lighting fixtures, brown of walls are softened and enhanced by ceiling motifs worked out in soft grays, blending into cream and tans.

Three main apartments lead off from the rotunda. Immediately to the rear is the Army Aeronautical Museum. Above the double doors leading therein is an aluminum clock set in wings. This room,

which extends the full height of the building, with sky as well as side window lighting, measures 115 by 141 feet. A full-size Bomber, a Curtiss skeletonized Pursuit, and a wartime Nieuport take but a seemingly small amount of this space. A reduced size model of the first airplane to accomplish flight, with a figure representing that of Orville Wright lying on the wing, is but one of the hundreds of interesting items to be seen in the collection which, although not yet arranged for public visiting, has aroused intense interest of all who have been permitted a showing.

It is a large task to move a museum, involving special arrangement of hundreds of small items, special labeling of each, special stands and cases for proper preservation and display, and all this has not yet been fully accomplished. An opening day, however, may be set for the early future, as the Museum is to be of the working type of organization which will be actually completed only with the completion of the growth of Air Corps aeronautics.

To the right of the rotunda lies the Aeronautical Library, a light, delightful room for reading and study, its tables, desks, wainscoting and furnishings of walnut, its book-stacks double-decked, built for expansion to 32,000 from the 8,000 technical volumes now placed within them. To the left of the rotunda lie the administrative office and the editorial unit.

The second floor contains the document room, library office for cataloguing and other book work, and offices and class rooms of the Air Corps Engineering School. The document room, directly above the library, is fire and burglar proof - the whole building is fireproof - containing in metal filing cabinets one of the most valuable possessions of the Air Corps; namely, the collection of technical reports and documents describing the technical research and tests engaged in by engineers since the beginning of the Air Corps technical organization. Historically and as a working aid in engineering projects, the importance of these documents cannot be overestimated, and they are drawn upon freely not only by Government organizations but by designers and engineers of the industry.

The basement, which extends under the

whole building and is a half floor above ground, contains besides the statistical unit, the photographic laboratories, museum shops, storage and shipping rooms, and space for the study of research collections. This basement is light and well ventilated, with floors entirely of concrete. The photographic laboratories have the latest equipment for still and motion pictures, including sound films. A small projection auditorium with screen is provided for tryouts and the study of technical motion pictures. A series of vaults take care of stored negatives. Printing and development laboratories are strictly up to date. Photostating is also part of the work of these laboratories, and the newest of modern photostating machines have been installed.

Part of the basement will be used for exhibition of motors, of which the Museum possesses a most interesting collection, including wartime and many experimental types of later days. Other exhibits too extensive for the main exhibition hall will be shown here.

The Army Aeronautical Museum has four major functions:

It is a museum of record. Aeronautical materiel and equipment are procured, classified, and permanently preserved as record to establish definitely the dates of inventions, development and production of such items. This information is of value in connection with patent applications, etc.

It is a museum of research. Exhibits are arranged in series showing the development of each class of objects with improvements and modifications that have occurred. This affords a basis for research by experimental engineers as they are able to study the prior art, avoid duplication of effort, and analyze operating principles from the actual objects.

It is a museum of education. The exhibits are so classified as to be readily available for educational purposes, especially in connection with the Air Corps Engineering School. The exhibits are also available for study by other students of aeronautical science.

It is a museum of history, being designated as a repository for items of historical interest pertaining to military aeronautics.

The Museum Building was erected from P W A funds at a cost of approximately \$255,000, including interior decorations and furnishings. Credit must be given to Captain Dache M. Reeves, Air Corps, for the vision which gave impetus to this important project and for the enthusiasm and energy which saw it through to completion. Major F. W. Wright, Chief of Maintenance, was in direct charge of the building procedure for the Air Corps. Pretzinger and Pretzinger, Dayton, Ohio, were the architects.

The Technical Data Branch and Museum

collections had barely been moved to the new quarters when Captain Reeves was called to foreign service. Major William J. Hanlon has taken his place as Museum Director and Chief of Technical Data Branch, General Robins, the Chief of the Materiel Division, being in direct charge.

It is believed that the Museum will be a mecca for the aeronautically minded for many years to come and will grow in value and usefulness to the Air Corps as well as to the aeronautical industry.

---oOo---

INTERCHANGE OF AIR FIELDS BETWEEN THE ARMY AND THE NAVY

The jurisdiction of the War Department over Rockwell Field, Coronado, Calif., terminated on October 25, 1935, when the Navy Department took over this field. On the same date the jurisdiction over the Naval Air Station at Sunnyvale, Calif., was transferred to the War Department.

As a result of this interchange of air stations, a total of 14 officers and 279 enlisted men of the 19th Bombardment Group, Air Corps, was transferred to March Field, Riverside, Calif., viz:

Headquarters, 3 officers (1 attached) and 31 enlisted men.

30th Bombardment Squadron, 5 officers and 49 enlisted men.

32nd Bombardment Squadron, 2 officers and 49 enlisted men.

76th Service Squadron, 4 officers and 150 enlisted men.

The Station Complement at Rockwell Field, consisting of 6 officers and 179 enlisted men, will be divided between Sunnyvale and March Field, as may be determined by the Commanding General of the 9th Corps Area.

The 19th Airship Squadron, consisting of 2 officers and 118 enlisted men, will be transferred from Langley Field, Va., to Sunnyvale, Calif., the two airships of this squadron being flown across the continent and the remainder of the personnel and equipment shipped by transport from Newport News, Va., on the first transport practicable consistent with the other requirements of the Quartermaster General.

The Air Depot now at Rockwell Field will remain there until such time as arrangements can be made for its accommodation at some other place. Until the Air Depot is completely evacuated, the military personnel remaining at Rockwell Field will be based for Quartermaster and medical service and supplies on Fort Rosecrans.

The Army will be permitted to make use of the flying field at Rockwell Field for flying incident to the operation of the Air Depot, under such local regulations as may be prescribed by the Navy Department or by its representative.

The fixed harbor defense installations now at Rockwell Field will not be evacuated and the Commanding Officer, Harbor Defenses of San Diego, will at all times have

free access to such installations.

All buildings, permanent and temporary, and fixtures carried on historical records will be transferred to the Department assuming jurisdiction.

The lighter-than-air hangar and operating facilities thereon at Sunnyvale will not be dismantled, unless such action later is specifically authorized by the President. The Navy will define the lighter-than-air equipment and facilities involved. The Navy will retain responsibility for the maintenance of the lighter-than-air equipment not in use by the Army, such as the movable mooring mast and the stern beam. Navy personnel, by arrangement with the Commanding Officer of Sunnyvale, will have access to the equipment for this purpose.

The evacuation of the Air Depot at Rockwell Field will be progressive but as rapid as is consistent with the continued performance of its assigned functions. During this transition period, the War Department will occupy and utilize the facilities in certain areas which have been outlined.

---oOo---

MEXICAN OFFICERS VISIT KELLY FIELD

The Mexican Military Mission, consisting of Lieut.-Colonel Luis Alamillo, Major Losano Bernal, Captains Gorza, Grajalles and Cassillas, visited Kelly Field on September 30th. These officers were received at Headquarters by Lieut.-Colonel H.H.C. Richards, in behalf of Colonel Jacob E. Fickel, the Commanding Officer, who was absent on a cross-country training flight.

The officers were then taken on a tour of inspection which included the Attack, Bombardment, Observation and Pursuit Training Sections; the camera obscura bombing range, and the indoor miniature range. The class of students in the Bombardment Section demonstrated the method of practice in bombing by use of the camera obscura. The Mission was very interested in this method of training a bomber. While at the miniature range, sample problems were "fired" by flashing small lights in the vicinity of the targets, and the method of training airplane observers in the conduct of artillery fire was explained in detail. The members of the Mission were also interested in learning the number of hours required for students to familiarize themselves with the operation of types of airplanes with which the students had no previous experience.

The members of the Mission were unable to accept an invitation to lunch at the Aviation Club, due to a prior engagement with the Mexican Consul in San Antonio.

NEW WEATHER STATIONS ESTABLISHED

Mindful of the fact that the direct air route between Bolling Field, D.C. and Burgess Field, Pa., flown by many Army aircraft, is characterized by weather which is frequently unfavorable to flying, the Signal Corps has established three weather stations along this route and has arranged for more frequent and reliable weather reports from this region than have heretofore been possible.

The new stations are as follows:

MWR, Admiral Byrd Airport, Winchester, Va.; elevation 700 feet; 60 miles from Bolling Field; fair landing field, with daytime hangar and flying service; commands view of Shenandoah Valley, Blue Ridge to southeast, and eastern Allegheny outpost ridges to northwest.

MFR, Frostburg Ridge (Big Savage Mountain), 2 miles west of Frostburg, Md. Elevation 2850 feet; 115 miles from Bolling Field, 45 miles from Burgess Field; visibility unobstructed to east and west; ridge tops to north and south about 100 feet higher than station. On clear days, observer can see Martin's Mountain, 20 miles to east, and Meadow Mountain, 12 miles to west.

MKR, Keyser Ridge, 5 miles west of Grantsville, Md. Elevation 2900 feet; 30 miles from Burgess Field. Visibility from top of garage unobstructed in all directions. On clear days observer can see, to the east, Negro Mountain (3 miles), Meadow Mountain (10 miles) and Frostburg Ridge (15 miles); to the west, Winding Ridge (5 miles) and Woodcock Hill (15 miles). One or two farm fields on the ridge top near the station could on occasion be used as emergency landing fields.

These stations will observe weather at the following times daily, including Sundays and holidays: 6:40 a.m., 7:40 a.m., 8:40 a.m., 10:40 a.m., 12:40 p.m., and 2:40 p.m. Ceilings will be estimated. Reports will be forwarded by commercial telephone to Bolling Field or Burgess Field, will be collected by radio at Bolling Field, and will be added to the Mid-Eastern Air Corps Alert Net hourly weather broadcast.

The new weather service on the Bolling-Burgess route is intended to cover only daytime flying under fair-to-good weather conditions. At night, or in really bad weather, the Washington-Frederick-McConnellsburg-Ducktown-Pittsburgh airway should be followed. This commercial airway is equipped with 24-hour teletype service and every other technical aid to flying. Its use entails only 27 extra miles of flying between Washington and Dayton.

Flights outside the hours between 6:40 a.m. and 2:40 p.m. should be routed over the Washington-Pittsburgh airway.

GRADUATION OF STUDENTS FROM ADVANCED FLYING SCHOOL

Class 23-B, consisting of 31 Regular Army officers, 3 foreign officers and 33 Flying Cadets, was graduated from the Advanced Flying School, Kelly Field, Texas, on Saturday, October 12th. The names of the students constituting this graduating class were published in the previous issue of the News Letter.

All students participated in an aerial review, which was followed by a demonstration of acrobatics by a team of three pilots from Randolph Field. This formation was led by 1st Lieut. T.J. Meyer, with 1st Lieuts. Yost and Morgan as wing men. Upon the completion of this demonstration, parachute jumps were made by three members of the Parachute Department at Kelly Field.

Graduation exercises were held at 10:00 a.m. at the War Department Theater. Colonel Jacob E. Fickel, who presided at the exercises, introduced Major-General Johnson Hagood, Commanding General of the 8th Corps Area, who made the graduation address.

Major Edmund W. Hill, the only regular Air Corps officer in the graduating class, was assigned to the Headquarters, Sixth Corps Area, Chicago, Ill. The station assignment of the other commissioned personnel of this class was published in the previous issue of the News Letter.

The Flying Cadet graduates were assigned under their cadet status to Air Corps stations, as follows:

To Hamilton Field, Calif.:

Richard T. Kight
William J. Moser
Edward L. Reid
John M. Reynolds

To Langley Field, Va.

James W. Allen
Charles E. Bockman, Jr.
James W. Chapman
James O. Ellis
Edward A. LePenske
Merrill E. Thayer

To Mitchel Field, N.Y.:

Conrad J. Herlick
John L. Randall
Peter H. Remington

To Selfridge Field, Mich.:

Franklin M. Cochran
Maxwell H. Crowell
Evert W. Hedlund
Howard F. Niccols
Quentin T. Quick

To Barksdale Field, La.:

Theron Coulter
Robert W. Hall
Bingham T. Kleine
Robert C. Love
Raleigh H. Macklin
Thomas L. McKissack
Marion Malcolm
Robert C. Paul

To Barksdale Field, La. (Cont'd):

Horace A. Shepard
Herbert M. West, Jr.
Cy Wilson

To Brooks Field, Texas:

Howell G. Crank
Willard W. Lazarus
Graves H. Snyder
Stanley A. Zidiales

---oOo---

BRITISH OFFICERS VISIT KELLY FIELD

Group Captain T.E.B. Howe, Air Attache at the British Embassy in Washington, and Group Captain H. G. Smart, British Royal Air Force, visited Kelly Field on October 16th. They were received at Post Headquarters by Colonel Jacob E. Fickel, Commandant of the Advanced Flying School, and Lieut.-Colonel H.H.C. Richards, Assistant Commandant in charge of training.

Following a discussion of the training system in operation at this school, the British officers were taken on a tour of inspection of Kelly Field. After visiting the four training sections, they inspected the camera obscura bombing range and the miniature range, where the indoor practice given students in the regulation of artillery fire and cooperation with various units of the Infantry was demonstrated. A demonstration was also given on the method of familiarizing the students with the operation of bomb sights by the use of a moving carpet upon which representative topography had been painted.

The British officers stated that it was difficult to compare the system of training flying students in the Training Center with the system used in Great Britain, as the British Air Force is a separate department from the Navy and War Departments. They have a college providing a general education for their officer candidates in a similar manner to our own West Point, but since only Air Corps candidates attend that college, flying training is given in connection with their general training. They maintain a central flying school which supervises the training methods used at all of their flying training establishments.

---oOo---

When it comes to downright high-powered boosting, residents of so called "Sunny California" are second to none. For instance, the News Letter Correspondent from Crissy Field, Calif., in announcing that the Commanding Officer of that field, Major Floyd E. Galloway, accompanied by Captain George H. Brown, recently departed on a long-distance navigation flight to various points in the U.S., concludes thusly: "We hope they have a nice trip and do not encounter too much snow and cold weather. We believe they prefer to fly in 'Crissy fog' in preference to the 'cold white snow.'"

V-6885, A.C.

AND HE LEARNED ABOUT FLYING FROM THAT

On a transcontinental ferry trip, a pilot was peacefully flying along over the western desert country, slowly gaining altitude to cross some mountains ahead, when he became aware of a trickle of gasoline flying back into the cockpit. Being over a rugged and deserted section of the country, his first reaction, in addition to trying to find out what was wrong, was to gain more altitude in case a forced landing might be in order. The higher he climbed the greater the leakage, until it was pouring back in a steady stream and wetting the pilot's legs. Spare maps were folded and stuck inside the trouser legs to prevent burns. The plane was landed at the first emergency field.

An investigation showed a leaking gas pressure gauge. The pilot crimped the

line to the gauge with a pair of pliers and took off again. Upon reaching an altitude of around 5,000 feet, the gauge commenced to leak again. At 8,000 feet it was leaking badly. Shortly after passing a range of mountains, altitude was reduced to 2,000 feet and the leak stopped.

The pilot finally determined that reduced atmospheric pressure at higher altitudes allowed the internal pressure in the gauge to force gasoline out and that at lower altitudes the outside pressure was sufficient to keep the instrument tight. By keeping the dry maps inside his trouser legs to prevent gasoline burns when flying at high altitudes and remaining at low altitudes as much as possible, the pilot continued safely to his destination.

---000---

OVERCOMING THE WEATHER FACTOR IN TACTICAL OPERATIONS

Personnel of the 19th Bombardment Group at Rockwell Field, Coronado, Calif., believe they can add one more achievement to their credit as pioneers. Already noted for their work in the development and practical use of navigation and instrument flying, it is but fitting and proper that this Group should be the first to make real progress in overcoming the weather factor in tactical operations. While admitting that to date the problem of bombing a target that is obscured by fog is a little beyond them, they are proving daily that fog and clouds at their home field is no problem at all.

With the help of Brigadier-General Henry H. Arnold, Commanding the 1st Wing, GHQ Air Force, a bombing target has been secured at Muroc Lake on the Mojave Desert, about one hundred and seventy miles from Rockwell Field. Every morning bombing and gunnery missions are scheduled on this target and, although on many days the field is covered with the usual fog with low ceilings and poor visibility, there has not yet been a mission cancelled for weather. The stock phrase of flight schedules "weather conditions permitting" has been completely discarded.

---000---

UNTIMELY DEATH OF LIEUT. HOYT D. WILLIAMS, AIR CORPS

Randolph Field experienced its first fatal accident to an instructor this year with the crash of Lieut. Hoyt D. Williams, Air Corps, on September 19th.

Lieut. Williams and Captain H. M. Turner, the flight commander, had been up together going through some of the maneuvers taught to students on the "A" Stage, and they crashed from about 200 feet as they were approaching Randolph Field for a landing. Lieut. Williams had just recently reported from the Panama Canal Department.

Captain Turner, although cut and bruised considerably, is again able to get around, but has not been returned to duty.

Lieut. Williams, a graduate of the June, 1931, class of the United States Military Academy, West Point, N.Y., was born in Georgia on March 3, 1907. Commissioned a second lieutenant of Field Artillery, he applied for

detail to the Air Corps and began training at the Primary Flying School at Randolph Field, Texas, with the October, 1931, class. He graduated from the Primary Flying School on June 24, 1932, and from the Advanced Flying School at Kelly Field, Texas, on October 14, 1932, being given the rating of "Airplane Pilot" effective that date. He specialized as a Bombardment pilot.

Lieut. Williams' first assignment to duty with the Air Corps was at Albrook Field, Panama Canal Zone, where he served with the 44th Observation Squadron. He qualified for the rating of "Airplane Observer" on January 22, 1934. Upon the completion of his tour of duty in Panama, he was assigned as a Flying Instructor at the Primary Flying School at Randolph Field.

The untimely death of such a promising young officer as Lieut. Williams had proved himself to be is keenly regretted and is a distinct loss to the Army Air Corps.

GUNNERY PRACTICE BY 91st OBS. SQUADRON

With the maneuvers about over, including the 4th Army maneuvers in the Northwestern part of the United States, the 91st Observation Squadron, Crissy Field, Presidio of San Francisco, Calif., completed its gunnery on ground targets with some excellent scores, and have now started with tow target gunnery over the water area just off the coast of the San Francisco peninsula. The following item from the local newspaper gives the civilian conception of tow target work:

"The pilots from Crissy Field entertained the customers at Fleishhackler Park yesterday as they practiced tow target firing just off the coast. Captain L.D. Frederick was in charge of the operations, and the following pilots were alternating on ripping the bag apart which was towed behind the plane of Private Cannon: Lieutenants F.O. Dice, E. Maughan, G.L. Thomson, E.D. Avary, J.M. Schweizer and L.J. Halvorsen."

---oOo---

FLYING UNDER "HOOD" ON WEST COAST

Captain L.D. Frederick, pilot, with Captain George H. Brown, observer, flew from Crissy Field, Presidio of San Francisco, Calif., to Fort Lewis, Wash., under the "hood," with intermediate stops at Medford, Oregon, each way. The total flying time was 13 hours and 30 minutes. Upon arrival at Fort Lewis on the trip North and on returning to Medford on the trip South, Captain Brown said they were both flying blind due to the immense amount of smoke in the air from the many forest fires in that section of the country.

---oOo---

A WELCOME TO THE 88th OBSERVATION SQDN.

The News Letter Correspondent from Crissy Field, Calif., says:

"The 91st Observation Squadron, 'California's Own' until a short time ago, welcomes our new neighbors who have been transplanted from the burning sands of Texas to the wonderful climate of Sunny California. We wish to extend our hand across the Bay - through the fog - to welcome the 88th Observation Squadron now stationed at Hamilton Field."

---oOo---

TWO GENERALS VISIT HAMILTON FIELD

Flying a bi-motored Douglas Transport, the first to be delivered to the Army Air Corps under contract with the Douglas Aircraft Company this fiscal year, Brigadier-General Frank M. Andrews, Air Corps, accompanied by Brigadier-General A.W. Robins, Air Corps, paid a

short visit to Hamilton Field on October 4th, enroute to the Douglas plant at Santa Monica, Calif., from Crissy Field.

The specific business of the Generals on the West Coast dealt with the transfer of Sunnyvale to the Army in exchange for Rockwell Field, North Island, San Diego, Calif.

---oOo---

SPECIAL DEMONSTRATION SQUADRON PERFORMS

West Coast Military Aviation was exhibited to the critical eyes of the students of the Command and General Staff School, Fort Leavenworth, Kansas, following the arrival at that station of the Special Demonstration Squadron, a provisional organization, composed of some of Hamilton Field's finest pilots.

This Squadron was at the Command and General Staff School for the purpose of demonstrating tactical bombardment maneuvers to a group of officers, gathered from various branches of the Army, who, while they may not be pilots themselves, are thoroughly familiar with all the elements of military strategy.

The Squadron, equipped with Martin B-10 airplanes, the same ships which made the flight to Alaska in 1934, was under the command of Captain John G. Moore, Air Corps.

---oOo---

FIRE PREVENTION WEEK AT SELFRIDGE FIELD

The week of October 6th - 13th, "Fire Prevention Week," was observed at Selfridge Field, Mt. Clemens, Mich., with a general house-cleaning, involving the removal of accumulation of trash from basements, attics and storerooms which present fire hazards, the appointment of a board of officers to inspect all buildings of the post in this connection, lectures on fire prevention, and practice of fire drill by fire squads and fire department, including simulation of actual fire conditions.

---oOo---

THE NEW CLASS AT RANDOLPH FIELD

The new class of students which reported recently at the Primary Flying School at Randolph Field, Texas, began flying training on October 21st. This class is composed of 48 officers of the last West Point class, six additional Army officers, 91 Flying Cadets and three foreign officers, these latter being 1st Lieut. Mariano P. Munoz, Mexican Army, and 3rd Lieutenants Jose Francisco and Vicente B. Luna of the Philippine Constabulary.

---oOo---

Brigadier-General Frank M. Andrews, commanding the GHQ Air Force, landed recently at Bolling Field, D.C., in the Air Corps' first new Douglas Transport. Inspecting it inside and out, the only adjective needed, according to our correspondent, is "Collapsing."

PITTSBURGH BECOMES POPULAR VISITING POINT FOR PILOTS

By Captain Corley P. McDarment, Air Corps

The Pittsburgh Airport is rapidly becoming one of the "hottest" ports for military aircraft. In August, the total number of planes serviced was 180; in September the number jumped to 204; and from October 1st to 17th, the number was 128. Nearly all of these were visiting planes. The gasoline consumption far exceeded the earlier estimates for this station.

Due to the limited PX service now available on teletype, arrangements have been made to clear military traffic through the radio network of Burgess Field. The new Department of Commerce regulations giving extended weather reports and special reports to airmen, curtails the amount of material that can be handled through teletype channels. Hourly broadcasts are made to Burgess Field, where the message is put on the net, or on the Burgess teletype.

Colonel C.C. McGovern, Chairman of the Allegheny County Commissioners, is making a big fight, supported by the newspapers, to force utilities companies to put their power lines underground in the vicinity of airports.

The "billiard table" surface of the County airport finally got our PT-3 airplane. But it was not the fault of the airport. It was the case of an airport being too good. The smooth surface of the port is bad medicine for planes without brakes, such as the PT. The wind makes such planes a weather vane on a smooth surface. A few days ago when Major L.T. Barry, Reserve, was flying the PT, a cross wind caught him on the ground and whirled him into a ground loop, causing a wheel to collapse, a wing to catch and - a windup of one PT.

With the washout of our one and only PT, the "defenders of Pittsburgh" have but one plane left, an O-1E. This plane is being handled like a crate of turkey eggs. The Reserves realize that, if the war should spread to America, this is the only plane they have in which to make a get-away.

Among the Pittsburgh pilots who attended the Air Reserve Convention in Louisville, October 10 - 12, with Unit Instructor, Captain Corley P. McDarment, were Major H.R. Bazley, Captain Robert E. Dake, and Lieut. Dallas B. Sherman. Captain Brent Merchant, of Washington, D.C., and one of the Corps Area delegates, checked in with the Pittsburgh Reserves at the Convention. Captain Dake placed his private airplane at the disposal of Air Reservists to attend the Convention.

It is earnestly hoped that all Army aviators visiting the Pittsburgh Airport will in time become acquainted with basic commercial flying regulations. Some of the best rules to remember are:

Circle the field to the left before landing at about 1500 feet. If there is danger, a red light will be flashed upon the pilot from the tower.

Don't make "dive landings." When diving upon a field for a landing without having circled the field, a plane can easily collide with a transport which will be coming in on a long glide.

And DON'T take off from the middle of the field. Fields are made big for a purpose. Most airplanes can take off from the middle of the Pittsburgh airport, but the management wants us to use the whole field, because a forced landing upon the field is of little consequence, whereas a forced landing in the gulch messes up the new ambulance too much. They are trying to keep this ambulance clean. Some of the boys who fly in the wide open spaces seem to forget that Pittsburgh is not just a suburb of San Antonio - not yet anyway.

And please remember that RED means DANGER, even in China and Ethiopia. A pilot landed at our airport several months ago, and when he entered the operations office he said:

"You know somebody was playing with me from that tower as I came around the field. He flashed a red light on me. Heh! Heh! Heh! But I didn't play with him. Do they do that often?"

"No," we explained, "they were trying to tell you that a transport which had the right of way was landing beneath you, and you were being warned."

"Hah! Hah! Hah! So that explains the big commotion I saw on the ground when I landed. Yowsah."

Sometimes a pilot, who has never been to Pittsburgh before, will see that large slab of concrete, the biggest in the world, which makes the airport, and he won't believe his eyes. He thinks there is something phoney about it, and he lands on the ramp that goes down to the hangars, a stunt like landing in front of the Capitol in Washington.

---oOo---

AIR CORPS GENERALS VISIT CRISSY FIELD

On the morning of October 3rd, Generals Robbins, Andrews and Arnold, on an inspection tour of air fields, including Sunnyvale, landed at Crissy Field, Calif., to visit General Malone, Commanding General, Ninth Corps Area. Their itinerary called for a departure in the early afternoon, but the usual Crissy fog prevented departure until late on the morning of the 4th. During their stay, the officers of Crissy Field entertained the visiting Generals at the Pago-Pago Club. "We enjoyed their visit very much," says the News Letter Correspondent, "but must apologize for the unusual California weather."

SIXTH PHOTO SECTION IN ACTION
By 1st Lieut. Charles A. Clark, Jr.

In connection with the aerial survey being carried on of possible and emergency landing fields in the Philippine Archipelago by Major-General Frank Parker, Commanding General of the Philippine Department, the 6th Photo Section at Nichols Field, P.I., has been called upon from time to time to send photographers on these flights for the purpose of taking aerial photographs of the various landing fields under study.

This aerial survey has been in progress for some time, and it was on one of these flights that General Parker discovered the Volcano, now known as the Parker Volcano, and the Maughan Lake, which is located in Cotabato Province of Mindanao, P.I.

On another of these flights, General Parker made a trip to the Islands north of Luzon. A base was established, and an intensive aerial photographic survey was accomplished of all the Islands in the Babuyan Group and the Batan Group, landing fields and seaplane bases being established wherever possible. At Basco on the Island of Batan in the Batan Group, a very excellent landing field was established, and several flights by the 4th Composite Group have been made there since. It is believed that these flights are the first to have ever landed on the Northern Islands.

At this writing General Parker is on another of these surveys in the Southern Islands to determine whether or not there are any possible landing fields or

seaplane bases in the Tawitawi Group.

Oblique and vertical photographs of all these fields so selected and established to date have been made up in loose-leaf albums and distributed, one each to: the Commanding General; Department Air Officer; the Group Operations Officer at Nichols Field and the Operations Officer at Clark Field. Prints are also being submitted to the Information Division, Office of the Chief of the Air Corps, Washington, and to the Assistant Chief of Staff G-2, Philippine Department.

As new fields are established, photographs are taken and submitted to G-2 for classification, after which all the necessary information is entered on a data sheet, such as the location of the fields, provincial and island, the prevailing winds, length and width of field, obstructions, terrain and nearest communication and servicing facilities, etc. These data are then attached to each photograph and sent to the various activities having possession of the albums.

This aerial survey of landing fields is expected to continue for an indefinite period, as there are still several localities in the Central Islands remaining to be studied for possible landing fields.

When this aerial survey is completed, it should prove of great value to the new Commonwealth Government of the Philippines, and a word of praise is due the Army for bringing the people of the Philippines closer together through their use of these newly developed landing fields for commercial bases and eventually as military landing fields.

---00---

QUARTERLY LOAD TEST OF TACTICAL AIRPLANES AT ROCKWELL FIELD

The 19th Bombardment Group, Rockwell Field, Calif., one of the organizations of the 1st Wing, GHQ Air Force, conducted on October 10th its regular quarterly load test of all tactical airplanes with full military load.

Under the direction of Lieut.-Colonel H.C. Davidson, Air Corps, Group Commander, the trucks and airplanes started rolling at 8:00 a.m., and in a very short time a complete field camp was established and operating on the south edge of the island. An hour after the airplanes arrived on the camp parking line, seven B-10's of the 32nd Bombardment Squadron were loaded with full machine gun armament, liquid oxygen at all stations, and nine 100-lb. bombs apiece. One other B-10 was first loaded with and dropped a 2,000-lb. bomb, and then took on its load of 100-lb. bombs. Starting at 10:00 o'clock, the B-10's roared off at five-minute intervals on a regular mission which required them first to navigate 130 miles over the

Pacific, then 90 miles across mountains and deserts. While on the first leg, all machine guns were fired. Finally arriving at the Group's bombing target at Muroc Lake, on the Mojave Desert, each crew conducted bombing, flying at an altitude of 15,000 feet. On the completion of this phase and on the return to Rockwell Field, a test of the functioning of oxygen equipment was conducted at higher altitudes.

In the meantime, the 30th Squadron was required to demonstrate its ability to navigate over water by flying an amphibian over a course which took it over several of the channel islands on a two-hour flight.

Each Squadron established its own kitchen, and the noon meal was served in camp. Brigadier-General Henry H. Arnold, Wing Commander of the First Wing, arrived in a B-12 from March Field at about 9:00 o'clock, and spent the morning observing the conduct and progress of the test. He expressed himself as being much pleased with the smooth functioning of the organization.

The crews of the B-10's did not really

know when the actual test was concluded, as they took off again at 4:00 p.m., for March Field, where they flew a mission for the 63rd Coast Artillery (Anti-

Aircraft. When they finally returned home to Rockwell Field, one jump ahead of the fog, they agreed they had been well tested.

---oOo---

THE AIR RESERVE CONVENTION AT LOUISVILLE, KY.

The Annual Air Reserve Convention at Louisville, Ky., October 10th - 12th, was a big success, so far as conventions go. The high spirit of determination on the part of the delegates to develop an air reserve for the country and to save what is left of the organization was the dominant note of the convention. Captain A.L. Woody, of Louisville, who is also Deputy F.E.R.A. Administrator for the Kentucky District, was elected President of the Air Reserve Association for the ensuing year.

Captain Henry Beatty, Air Reserve, of Birmingham, Ala., was elected Secretary. Captains Woody and Beatty may be remembered as the Reserve officers who made such a tremendous impression upon the Military Affairs Committee last April, when they described the plight of the Air Corps Reserves. The delegates at the convention expressed a desire to cooperate in any movement by the War Department to build up an Air Corps Reserve.

Among the visitors to the convention were Brigadier-General Oscar Westover, Major Robert L. Walsh and Captain R.C.W.

Blessley, all of the Office of the Chief of the Air Corps, Washington; Captain Wendell B. McCoy, of the Tennessee National Guard, who was present as an unofficial observer, and Lieut.-Colonel Wm. B. Wright, Air Officer of the 5th Corps Area, and a Past Master of Reserve duty, who was present in an advisory capacity.

Among Regular Army unit instructors present with their delegates were Captains John B. Patrick, of Atlanta; Bushrod Hoppin, of Cincinnati; Edwin Sullivan, of Dallas, Tex.; George E. Henry of San Francisco; W.C. Richards, of Boston; Milton J. Smith, of Indianapolis; Roland O.S. Akre, of New York; William W. Welsh, of Louisville; Corley P. McDarment, of Pittsburgh; and Lewis S. Webster, of Chicago. The Reserve units of Louisville, under Captain Welsh, Unit Instructor, "threw" all the entertainment that goes with conventions, and they established a hard mark for any other convention city to shoot at.

Oklahoma City, Oklahoma, was chosen as the Convention City for the next year.

---oOo---

COLONEL McCHORD LEAVES THE CANAL ZONE

Colonel William C. McChord, Air Corps, the first commander of the 19th Composite Wing, sailed from the Panama Canal Department on October 11th on the Transport ST. MIHIEL, for new duties in the Office of the Chief of the Air Corps in Washington.

Colonel McChord, during the first part of his two-year tour of duty in the Canal Zone, was the Commanding Officer of Albrook Field, and he was most tireless in his efforts to cut into the jungle and develop a real Air Corps station. Although funds for the building of the project ceased to be available when the field was only half completed, the 16th Pursuit Group and the 44th Observation Squadron are now fairly comfortably housed, and more land is gradually being reclaimed from the jungle.

The flying field is mostly on made ground and is without hard surface landing strips but, due to the energetic efforts of Colonel McChord, a system of French drains was installed which permits the year round use of an area of the field which is adequate for the present type of equipment.

On March 14, 1934, the 19th Composite Wing was organized, and Colonel McChord assumed command of the new unit as well

as the duties of the Department Air Officer, relinquishing active command of Albrook Field, although he continued to occupy quarters on the post.

Prior to his sailing, Colonel McChord was tendered an aerial review of the Wing which assembled at Albrook Field on October 4th. In addition to the honor guest, a number of senior officers of the Panama Canal Department and members of the Diplomatic Corps were present for the ceremony.

On the following day, a ground review of the troops of Albrook Field was held in Colonel McChord's honor, a band from the 4th Coast Artillery having been loaned to the 16th Pursuit Group in order to make practicable this additional tribute to the popular Air Corps officer.

Colonel McChord is being succeeded as Air Officer and as Wing Commander by Lieut.-Colonel John M. Reynolds, who has already arrived in the Panama Canal Department, and will immediately assume his new duties.

---oOo---

The Engineering Department of the San Antonio Air Depot, during the month of September, overhauled a total of 27 airplanes and 56 engines, and repaired 13 planes and 14 engines.

ARMY AIRMEN DESERT ROCKWELL FIELD

Rockwell Field officers and enlisted men said goodbye to their friends and acquaintances as they made preparations to leave for March Field where they will be permanently stationed. The transfer of the 19th Bombardment Group and half of the Station Complement was made in conformity with recent orders from the President directing the Army to vacate North Island in exchange for the Navy base at Sunnyvale.

As this movement of troops necessarily caused considerable re-arrangement of barracks and quarters at March Field, Major Walter Peck brought his 17th Attack Group back from the Imperial Valley on October 15th instead of October 21st, as originally planned. The 64th Service Squadron returned Thursday after transporting the 34th, 73rd and 95th Attack Squadrons back to March Field on Wednesday, October 15th. The outfits were stationed at Brawley, Imperial and Calexico.

Lieut.-Colonel Howard C. Davidson, commanding the 19th Bombardment Group, will bring 28 officers and 306 enlisted men with him. Only half of the Station Complement will make the journey, the remainder, about 100 men, going to Moffett Field, Sunnyvale.

Porches on the barracks will be utilized for sleeping quarters. Glass windows will be placed in the concrete archways of the barracks to close them in against the winter weather. Hangars one and two (concrete) have been assigned to the airplanes of the 19th Bombardment Group. A wooden hangar will be used for the Group offices.

---oOo---

FLYING INSTRUCTORS ON NAVIGATION FLIGHTS

At the Primary Flying School at Randolph Field, Texas, during the two weeks' break between classes, a number of the flying instructors took advantage of the opportunity to meet the training directive requirements for cross-country work. A report from Crissy Field stated that one morning there were so many BT-2's on the line there that it looked like a Basic Training Stage. Deserving particular mention is a flight made by Lieut. Donald N. Wackwitz, who took off from Randolph Field at 6:40 p.m., October 4th, in a BT-2, and arrived at Columbus, Ohio, at 8:30 a.m. the following morning. Stops were made for fuel at Hensley Field, Dallas, Texas; Little Rock, Ark., and Louisville, Ky.

---oOo---

PURSUITERS CONCENTRATE AT LANGLEY FIELD

The 1st Pursuit Group, Selfridge Field, Mich., commanded by Lieut.-Colonel Ralph Royce, departed on the morning of

October 7th for Langley Field, Va., to take part in the concentration of the 2nd Wing, GHQ Air Force, units at that place during the period October 7th to 10th, inclusive. The Group, consisting of the following personnel and airplanes, commenced taking off at 7:00 a.m., with flights departing at 15-minute intervals until all planes were off the ground.

Headquarters Flight, 6 pilots, 14 enlisted men, 5 P-26A's, 1 C-19.

17th Pursuit Squadron, 6 pilots, 11 enlisted men, 6 P-26A's.

27th Pursuit Squadron, 8 pilots, 11 enlisted men, 6 P-26A's, 1 C-4A (Wright Field), 1 C-27A (Patterson Field).

94th Pursuit Squadron, 7 pilots, 11 enlisted men, 6 P-26A's, 1 C-14.

56th Service Squadron, 4 enlisted men.

One C-4A Transport from Langley Field, one C-4A from Wright Field which made two trips, one C-14 from Selfridge Field, a C-14 and a C-24 from Langley Field and a C-19 from Selfridge Field were used to transport personnel and supplies to the point of concentration; with the C-27 from Patterson Field being used exclusively for the transportation of supplies and equipment. All commissioned personnel and flying cadets of the Group were housed in the Post Exchange building at Langley Field, the enlisted personnel being quartered with the 59th Service Squadron. Necessary ground transportation for the Group was furnished by the 2nd Bombardment Group, and gasoline and oil were secured from the supply at Langley Field.

---oOo---

NEW WEATHER STATIONS IN VIRGINIA

For the convenience of pilots departing from Bolling Field, D.C., for points North, West and South, new weather stations, Kylertown, Winchester, Skyland, Snow Hill and Warrenton, have been established, and bi-hourly weather reports come in from these stations. Areas that heretofore were blank on weather reports are now no longer so.

---oOo---

MAJOR PRATT RECEIVES DISTINGUISHED HONOR

Major Fabian L. Pratt, Medical Corps, stationed at Hamilton Field, San Rafael, Calif., has, after nomination by the Surgeon General of the Army, been awarded a Fellowship in the American College of Surgeons, a distinguished honor which is the objective of all military surgeons.

The award of the Fellowship entitled Major Pratt to place the coveted letters "F.A.C.S." after his name.

---oOo---

On October 16th, the Navy started to work on the North-South runway at Bolling Field, putting a new cover on that part of it which has become uneven and filled with holes.

B I O G R A P H I E S

LIEUT.-COLONEL JOHN F. CURRY

During Lieut.-Colonel Curry's career as an officer of the Army, a considerable part of his time was devoted to school activities, either in the capacity of student, instructor or Commandant. His affiliation with Army aviation activities dates back to August, 1913, when, as a 1st Lieutenant of the 15th Infantry, he was attached to the Aviation Section, Signal Corps, to undergo flying training at the Signal Corps Aviation School at San Diego, Calif.

Col. Curry was born in New York City on April 22, 1886. He attended Columbia University in that city when he received an appointment to the United States Military Academy. Graduating from West Point on February 14, 1908, he was commissioned a second lieutenant and assigned to the 5th Infantry. For four years, beginning in August, 1910, he was on duty at the Military Academy as instructor in the Department of English and History.

Promoted to 1st Lieutenant, 5th Infantry, June 6, 1914, he was stationed at Plattsburgh, N.Y., June to November, 1914, and at Empire, Panama Canal Zone, November, 1914, to July, 1915.

At the Signal Corps Aviation School at San Diego, Calif., Col. Curry completed his flying training in May, 1916, whereupon he was rated a Junior Military Aviator. He was then assigned to the 1st Aero Squadron, and served as pilot with the Punitive Expedition into Mexico under General Pershing.

From February, 1917, to July, 1917, he commanded the 6th Aero Squadron at Fort Kamehameha, T.H. and, in addition, occupied the position of Department Aeronautical Officer, Hawaiian Department. He was promoted Captain of Infantry, March 25, 1917, and, by virtue of his rating as Junior Military Aviator, which conferred one higher grade, automatically became a Major on the same date.

Relieved from duty in Hawaii and ordered to Washington, D.C., he served as Chief of the Training Section in the Office of the Chief Signal Officer from August to November, 1917, in the meantime receiving his promotion to Lieut.-Colonel, Signal Corps, on October 23, 1917. He commanded Ellington Field, Houston, Texas, from November, 1917, to March, 1918, and was on duty as Flying Officer, Southern Aviation District, during April and May, 1918. After two months' temporary duty in Washington, he sailed for overseas duty with the A.E.F., and took courses of instruction in France at Pursuit, Aerial Gunnery and Observation Schools, following which he was assigned as Chief of Staff, Army Air Service, 2nd Army, at Toul,

France. He saw service over the front lines both as pilot and as observer, and was credited with the destruction of one enemy observation balloon.

While on duty with the Army of Occupation in Germany, Col. Curry took a course of instruction at the Army Center of Artillery Instruction at Trier, Germany.

Returning to the United States in August, 1919, he served in the Office of the Director of Air Service, Washington, D.C., as a member of the Advisory Board until January, 1920, when he returned to Hawaii for a two-year tour of duty as Department Air Service Officer, upon the termination of which he was transferred to the Engineering Division at McCook Field, Dayton, Ohio. Here he pursued a course of instruction in motor overhaul and assembly until August, 1923, when he was assigned as student officer at the Air Service Engineering School.

Upon his graduation therefrom on June 30, 1924, he was assigned as Commanding Officer of McCook Field and as Commandant of the Engineering School. When the Materiel Division was established at Dayton as one of the three major activities of the new Air Corps organization and Brigadier-General William E. Gillmore placed in charge thereof, Col. Curry served in the capacity of Executive Officer thereat until August, 1927, when he was transferred to Langley Field, Va., for duty as student at the Air Corps Tactical School. His graduation therefrom in June of the following year was followed by another year as a student at the Command and General Staff School at Fort Leavenworth, Kans. He then served as an instructor at the latter school until June, 1930, when he returned to Langley Field for duty as Assistant Commandant of the Air Corps Tactical School. When this school was moved to Maxwell Field, Montgomery, Ala., Col. Curry was assigned as Commandant thereof and as Commanding Officer of the field.

In March, 1935, when the War Department, in accordance with the provisions of the Act of July 2, 1926, inaugurated the policy of conferring upon Air Corps officers rank commensurate with duties performed, Col. Curry was given the temporary rank of Colonel, effective March 4, 1935. He was relieved from duty at Maxwell Field in August, 1935, when he started upon the one-year course of instruction at the Army War College, Washington, D.C.

Colonel Curry's record as an Air Corps officer is an outstanding one, and he has been commended on various occasions by his superior officers for the very efficient manner in which he performed the duties assigned to him.

LIEUT.-COLONEL BARTON K. YOUNT

Lieut.-Colonel Barton K. Young, Air Corps, is an officer of over 28 years of commissioned service, and his affiliation with military aviation began with his appointment as a Major, Signal Corps, August 5, 1917.

Born at Troy, Ohio, January 18, 1884, he attended the public schools in that city. He was a student at Ohio State University for one year when he received an appointment to the United States Military Academy. Upon his graduation from West Point on June 14, 1907, he was commissioned a second lieutenant and assigned to the 27th Infantry. He served with this regiment in Cuba with the Army of Cuban Pacification, from September, 1907, to April, 1909. He was promoted to 1st Lieutenant, May 27, 1913. On October 1, 1914, he was transferred to the 15th Infantry, and served with his regiment in China for several years.

Promoted to Captain, September 25, 1916, he continued service with the 15th Infantry until July 5, 1917, when he was transferred to the 8th Infantry, with which organization he served one month.

Col. Yount's first assignment in the Aviation Section, Signal Corps, was as Commandant of the School of Aeronautics, Austin, Texas, October 28, 1917, to September 30, 1918, and he was highly commended by the Commanding General of the Southern Department for his efficient administration of the affairs of this ground training school for young American flyers. For two months thereafter he was in command of the Aviation Concentration Camp at Camp Dick, Dallas, Texas, following which he was ordered to Washington, D.C., for duty in the Training Section, Office of the Director of Military Aeronautics. In addition, he served as a member of the Board on Peace Organization.

Ordered to Rockwell Field, San Diego, Calif., he pursued the regular flying course from February 18 to June 3, 1919, when he was rated a Junior Military Aviator. While at San Diego he served as President of a Board of Officers to make detailed plans on an Air Staff College.

On July 31, 1919, Col. Yount assumed command of March Field, Riverside, Calif., on which duty he remained for practically two years. Returning to Washington in July, 1921, he was assigned to duty as Chief of Air Service Training in the Office of the Chief of Air Service. On December 1, 1921, he was placed in charge of the ROTC, National Guard and Organized Reserve Section of that office.

Detailed as a student at the Air Service Engineering School at McCook Field, Dayton, Ohio, he graduated from the one-

year course on August 15, 1925, and was then ordered to duty at Paris, France, as Assistant Military Attache for Aviation at the American Embassy.

While on duty in France, Col. Yount served as a delegate at several international aviation conferences. He was also a delegate at the Disarmament Conference at Geneva, Switzerland, and attended in the capacity of technical adviser the Extraordinary Session of the International Commission for Air Navigation in June, 1929.

On August 1, 1929, he joined the class of student officers undergoing the one-year course of instruction at the Air Corps Tactical School at Langley Field, Va., and, upon graduation, assumed command of Rockwell Field and the Rockwell Air Depot at Coronado, Calif. While at this station he served as a member of the San Diego Joint Army and Navy Planning Committee. He received his promotion to Lieutenant-Colonel on February 28, 1931.

Placed in command of Bolling Field, D.C., on July 29, 1932, Col. Yount remained on this duty for two years, and he was then assigned as a student at the Army Industrial College. Upon the completion of the one-year course thereat, he was detailed, August 19, 1935, as a student at the Army War College, Washington, D.C.

---oOo---

PERSONNEL BOARD VISITS SELFRIDGE FIELD

The War Department Personnel Board arrived at Selfridge Field, Mt. Clemens, Mich., on the afternoon of October 7th to make a study of the personnel requirements of the individual units, the First Pursuit Group, and the command as a whole in connection with the GHQ Air Force at this field. The Board comprised Colonel William S. Browning (Field Artillery) I.G.D., Washington, D.C.; Lieut.-Colonel Follett Bradley, Air Corps, Langley Field, Va.; Major Rosenham Beam, Air Corps, Cavalry School, Fort Riley, Kansas, and Major John S. Winslow (Field Artillery) General Staff Corps, Headquarters Sixth Corps Area, Chicago, Ill. The Board departed from Selfridge Field on the afternoon of October 9th. On Monday, October 14th, Lieut.-Colonel Ralph Royce, Commanding Officer of the First Pursuit Group, and Major Fred C. Nelson, flew to Chanute Field, Rantoul, Ill., to confer with the Board, returning the same afternoon.

---oOo---

RANDOLPH FIELD GRADUATES GO TO KELLY FIELD

A class of fifty-eight students was graduated from the Basic Stage at the Primary Flying School, Randolph Field, Texas, and sent to the Advanced Flying School at Kelly Field, Texas, on October 15th. This class was composed of six Regular Army officers, two foreign officers, and fifty Flying Cadets. The foreign officers were Captain Jose C. Muricy, Brazilian Army, and 1st Lt. Jose G.V. Ahunada, Mexican Army.

The Caterpillar Club

Since the last Caterpillar Club compilation which appeared in the News Letter of September 15th, last, only two new members have executed the gesture every candidate necessarily has to make in order to become affiliated with this mythical fraternity, namely, the yanking of the parachute rip-cord. It is hoped that this welcome lull in the swelling ranks of the Order of Caterpillars is indicative of a downward trend in aviation accidents.

The two recent additions to the society of "Rip-Cord Yankers" are 2nd Lieut. William A. Hatcher, Air Reserve, stationed at March Field, Riverside, Calif., and Private William S. Decker, 52nd School Squadron, Randolph Field, Texas.

Lieut. Hatcher was forced to "bail out" on October 11th when, while flying about ten miles east of March Field, the landing oleo leg of his Pursuit plane let go, allowing the left wheel to hang $2\frac{1}{2}$ feet below the right wheel. Private Decker interpreted a signal from the pilot that he was to jump. Going over the left side of a Basic Training plane, feet first, he felt a jar as he was thrown back into the left horizontal stabilizer. He was then knocked clear of the airplane, whereupon he pulled the rip-cord, and another initiation into the Caterpillar Club passed into history.

Going over the reports on jumps which were previously mentioned in the News Letter, one from Flying Cadet Willis S. Marvin who, with his crew of three, passed through a wholesale midnight initiation near Enfield, Va., when a heavy fog closed in on all sides and he flew around until his gasoline tanks ran dry, states that after he ordered his crew overboard and when all were clear, he cut the switches, rolled up stabilizer, secured Air Corps Form #1 and jump.

"I knew I had to jump," Cadet Marvin stated and, describing a state of mind akin to that of Brother Crawford's wife, added: "I felt very unhappy but did not get rattled. I jerked the rip-cord, looked at it and thought 'that this is all there is to do,' and immediately felt the jerk of the parachute opening."

One of the crew in Cadet Marvin's plane, Corporal Frank B. Connor, 96th Bombardment Squadron, had a rather strenuous experience after he set sail for terra firma. "Knowing and understanding the conditions," he stated, "I was glad to be on my way with a parachute. Falling on my back, I could look up and watch the plane until it was clear, then I pulled the rip-cord. I could see the chute unfurl between me and a flare that had been dropped, and as the chute opened I turned several

flipflops. I stuck the rip-cord in my pocket and began rocking the chute to see how far the flare was above me. In a short time I was in fog and could see nothing. Looking down I could see tree tops. Placing my arms over my face, I slid down through the trees to an easy landing in water up to my neck. Being cold, the water felt warm and comfortable. Not being able to make my way around very well and knowing which way to start to get to dry land I found a tree that I could climb. I climbed to a limb about 25 feet from the water and stood there until daylight. I then got down and made my way out by bending small trees over and swinging from one to another, as the water was too deep to wade. The distance from the tree to the bank was about 25 yards. I walked about two miles to a farm house where I got transportation to a phone and reported in. I was then taken to a C.C.C. Camp at Hanover Court House, Va., where my clothing was dried. This section had been badly flooded."

No doubt Private Connor will long remember his cold wet night in a tree and the discomfort he suffered from getting poison ivy on his hands, face and ankles.

Private Daniel C. Murdock, of the 2nd Bombardment Group, Langley Field, another member of the crew of Cadet Marvin's plane, wrought havoc with a certain farmer's truck garden. When his parachute settled him down to terra firma, he messed up a cultivated plot of peas.

When Private Donald T. Wright, 7th Bombardment Group, Hamilton Field, Calif., "bailed out" of a Bomber at the order of the pilot, Lieut.-Colonel Clarence L. Tinker, Air Corps, when the left wheel of the retractable landing gear failed to come down and lock, he slid through the bomb bay, and after a delay of about four seconds clutched the "D" ring. He instinctively jerked the ring so hard that he struck himself on the forehead with it. The ring was knocked out of his hand, and the blow on his forehead caused a small wound which bled considerably. His enforced jump ruined his appetite for supper and a milk shake was the only food which appealed to him.

As previously reported in the News Letter, Col. Tinker flew the airplane to Rockwell Field and glided in on the ground on its belly, the damage being slight.

Major Samuel E. Brown, Medical Corps, a passenger in Lieut.-Colonel Tinker's plane, took his initiation into the Caterpillar Club in a very matter of fact way. He states in his report that his first reaction after the parachute opened was to note the time.

Sergeant John L. Bailey, another passenger in Col. Tinker's plane, stated: "Never having made a parachute jump before the feelings and reactions during and immediately after the jump were normal. There was no fear of a malfunction of parachute."

LUKE FIELD AIRMEN PARTICIPATE IN HAWAIIAN DEPARTMENT REVIEW
By the News Letter Correspondent

The Fifth Composite Group, Luke Field, T.H., took part in a Department Review both on the ground and in the air on September 2nd at the Divisional Review Field, Schofield Barracks, Honolulu, T.H., in honor of the visiting Congressional party.

Those friends and acquaintances who are used to seeing the "Luke Field Fliers" mentioned in the two downtown newspapers may discount the nomenclature after seeing the Review, when the entire Hawaiian Department staged a parade in honor of the visiting Congressmen. Those who have heretofore confined most of their time to doctoring old and ailing airplanes marched before the reviewing stand as ground troops, owing to the fact that there were not enough airplanes to go 'round. This all gave rise to such questions by amateur wise-crackers comfortably seated in the stands as: "Join the Air Corps and push a lawn mower" - "The Luke Field Fliers' cruising speed: four miles per hour" - "For 'eaven sake! Fawncy seeing you here, Charlie!" - "What! No planes!!!" - "You're gettin' a little left wing heavy there, Joe" - "Wish I wuz a little birdie er way up in the sky. I wouldn't do a single thing 'cept fly 'n fly 'n fly."

While passing the reviewing stand at the command "Eyes Right," we saw clad in the customary whites of the Islands such noted personages as Hon. Tilman B. Parks, of Arkansas; John F. Dockweiler, of California; Thomas S. McMillan, of South Carolina; Thomas L. Blanton, of Texas, J.B. Snyder, of Pennsylvania, and Major-General Hugh A. Drum, Commanding General of the Hawaiian Department. The thought came to many of us that, in spite of the magnitude of the occasion, it was still

---oOo---

EXPLORING THE SALMON RIVER COUNTRY IN IDAHO

Army Air Corps "Big Game" hunters, according to the News Letter Correspondent of the 41st Division Aviation, Washington National Guard, need spend only 24 hours in the rugged mountains of the Salmon River country in Idaho in order to secure their limit of deer and elk.

Lieuts. Claire Hartnett and Carl Schirmer, of the 41st Division Aviation, proved this to be true on a recent hunting trip, when they flew out two elk and a deer from the United States Forest Service landing field at Moose Creek, Idaho. They went only a short distance from the landing field to get their game, which was packed on horseback, taken to the Moose Creek ranger station, and then flown to Spokane in a commercial airplane.

hot and dusty. The General leaned over and said something to one of the Congressmen. He smiled and looked up and down the field; maybe he'd heard that one before, maybe not; just one of these mysteries that no one ever solves.

All of us at one time or another have wondered what the catcher says to the pitcher in a close ball game when he stalks out to the pitcher's box with a worried expression on his face and hands over the ball with some degree of reluctance. Others have glanced down in a hurried check for greasy spots and gravy stains when they've felt the piercing eyes of some stranger and heard some-muffled whispers in some public place. Still others have wondered if the loud thud on the ceiling, made by the family living in the apartment above, had anything to do with the time of night and the increasing volume of red hot rhythm coming over the radio, or whether they were nailing the carpet down, or rearranging a few pictures on the wall. That is how some felt when they saw the smiles on the faces of the Congressmen. They didn't know whether it was because some lost squad had strayed away from the multitude and wandered up into the stands or whether some unfortunate soldier's wrap legging had become unfastened and the man back of him was hitch-hiking past the stand with both feet on it. Anyway, the speculations were limited only by the time it took to return to the field and the number of men who were of the opinion that something went wrong back of them.

On the day following the review, the Honolulu ADVERTISER published a photo of the Fifth Composite Group passing the reviewing stand, under which appeared the caption: "21st Infantry passing the reviewing party."

Moose Creek landing field, used very extensively by the Forest Service airplanes during forest fire seasons, is in the heart of the virgin Selway Forest, accessible, aside from airplanes, to pack trains only. The airport has been used by tri-motored Fords in freighting supplies to forest rangers.

The landing field is down in the Moose Creek gorge, and the nearby towering peaks constitute part of the famous Seven Devil range of mountains. Protected from hunters, wild life in this region is often seen basking in the sunrays on the Moose Creek landing field.

It is in this general vicinity that the National Geographic Magazine Expedition down the Salmon River, the "River-of-no-Return," is drifting at this time.

Attempts to communicate with the party
V-6385, A.C.

by short wave radio by the 41st Division Aviation have not proved successful, probably due to the Forest Service type of crystal set used on the expedition barge. Contacts, however, have been established with Forest Service radio stations on the higher mountain peaks.

Much of the country surrounding the expedition's barge is from 5,000 to 8,000 feet above the Salmon River, which winds its way through a rich mining region.

That the expedition is progressing safely on its 354-mile drift has been established by the 41st Division Aviation, whose pilots have circled low over the barge on numerous occasions as the

party continued down the river.

On such occasions it was thought radio communication would be established, but failure is believed to have been caused by the fact that Howard Flint, U.S. Forester and party radio operator, had to be taken from the barge and flown to Missoula, Montana, hospital because of serious illness.

Dick Johnson, of Missoula, Mont., a commercial pilot, spiralled 5700 feet to a sand bar in the Salmon River to take Mr. Flint to the hospital after he had lain ill on the barge for five days.

Word of his illness, and the call for the airplane ambulance were relayed by short wave radio.

---oOo---

26TH ATTACK SQUADRON MANEUVERS ON ISLAND OF MAUI

The 26th Attack Squadron, stationed at Wheeler Field, T.H., with nine A-3B airplanes and crews, left on September 23rd for an inter-island flight to the Island of Maui. One stop enroute for refueling was made on the Island of Molokai.

The purpose of the flight was to work several cooperative missions with the 299th Infantry, Hawaiian National Guard. This regiment is unique in that most of the officers and almost all the men are native Hawaiians.

This was the first opportunity the Guardsmen had had to work with the Air Corps for over two years. In all three missions were flown, the first two being attacks on deployed troops, and the third an attack on a column on the march. The time and place of the second attack was published in the Maui newspaper in order to give the civilian

residents an opportunity to witness an Air Corps demonstration. A large crowd turned out and, judging by later comment, were very favorably impressed.

On the morning of the 24th, the officers and men of the Squadron were taken by motor to the top of Haleakela, the largest extinct volcano in the world. That evening the officers were guests at a dinner dance given at the Grand Hotel by the Maui Chamber of Commerce. It is an old Hawaiian custom that these affairs begin at dusk and last until dawn, and this was no violation of tradition.

When the Attackers started homeward, a stop again was made at Homestead Field on Molokai for gas. The entire trip was most enjoyable, and the Squadron is, indeed, sorry that the Hawaiian National Guard has but one encampment period per year.

---oOo---

WASHINGTON NATIONAL GUARD PILOTS QUALIFY IN INSTRUMENT FLYING

All pilots of the 41st Division Aviation, Washington National Guard, Felts Field, Spokane, Wash., have qualified in instrument flying and were issued their certificates by Major Robin A. Day, commanding officer and instructor.

Check flights started on Sunday, October 20th, at 9:30 a.m., and continued throughout the day until 5:00 p.m. Major Day, Captain Claude Owen, and Lieuts. Dale Swartz and Ray Albert Nolan were the check pilots, each devoting about two hours to every pilot of the Squadron.

Each check flight started with the pilot taking off under the hood and then going into level flight at an altitude fixed by the test pilot, who used the interphones.

Probably the greatest difficulty encountered by all pilots was in the proper execution of the 90 and 180 degree turns, the tendency being to tighten the turns. A similar experience was

witnessed in the fast turns. All phases of instrument flying were covered, including spiral climb, glides, stalls and recovery from spirals and spins. One pilot, completing "enough" spirals, became sick and found difficulty in righting the plane. Orientation proved to be the most difficult problem in the employment of the radio range beacon. Check pilots showed no mercy in their attempt to confuse the pilots. The orientation problem found its chief difficulty in the confusion as to which method is the best to employ. In every instance, however, the pilots solved the problem, some taking longer than others. All pilots expressed delight with the method advocated for instrument landings.

Major Day proposes to conduct weekly examinations on various phases of instrument flying, paying attention first to employment of the radio range beam and orientation. William A. Straith, pilot V-6835, A.C.

for the Northwest Airlines, will lecture for two periods on instructions regarding the methods of employing the Department of Commerce radio beam, Department of Commerce Aeronautical Bulletins Nos. 7, 18 and 19, and "Stark's Manual." The class periods for the entire month of November will be devoted to instrument flying.

To assist in beam flying, Lieut. Charles O. Holter, radio expert, has devised a special short antenna running from the tail assembly to the top of the vertical fin and controlled by a special switch in the pilot's cockpit. This new device has been found more satisfactory, because it eliminates noises to a greater degree.

---oOo---

EIGHTEENTH PURSUIT GROUP FLIES TO HAWAII

By the Wheeler Field Correspondent

The 18th Pursuit Group, stationed at Wheeler Field, Schofield Barracks, T.H., dispatched a flight of 19 Pursuit, 6 Attack and one amphibian airplane to Hawaii for an inter-island training flight and to conduct a tactical and a communications exercise on the Island of Hawaii. The flight was entirely successful and resulted in valuable training as well as a pleasant break in the monotony of flying training on Oahu.

On September 18th, the Group assembled by squadrons at 10:50 a.m. at 3,000 feet over Makupuu Point, the most easterly point on Oahu, and proceeded by the most direct route to the western tip of Molokai, the next island of the Hawaiian Group to the east. Weather conditions were perfect for the flight, and the excellent visibility afforded all personnel a splendid opportunity to secure an excellent view of the Leper Colony on the north shore of Molokai, the extensive pineapple fields on this island, the excellent Air Corps emergency field known as "Homestead Field," and the small town of Kaunakakai, made famous by the Hawaiian song "The Cockeyed Mayor of Kaunakakai."

Proceeding generally along the north shore of Molokai, the flight then jumped the few miles of ocean to Maui and secured a good view of the north shore towns and harbors, the Hawaiian National Guard encampment and, most interesting, a wonderful view of the mighty crater of Haleakala, one of the world's largest extinct volcanoes. The Pursuit flights dipped down into the crater and secured a close-up of the waterless crater floor with its numerous cinder cones.

Flying over the top of the few miles of clouds usually found on the northeast side of Haleakala, the flight took its departure from Kaniki Head on Maui and crossed the very rough thirty miles of open ocean to Upolu Point on Hawaii. All landed there at 12:20 p.m.

The entire group refuelled at Upolu Point from the two field pits. The landing field at this locality is long and narrow, lying along the sea. It is flanked on the east side by a sheer drop of 150 feet into the ocean. On the opposite side, the hills rise close to the field. In case one overshoots there is a convenient gully about

30 feet deep that will stop any plane with certainty. The entire field has two long rolls across its long axis and has a considerable slope to the sea. Temporary Air Corps buildings flank a part of the east side of the field.

The Pursuit planes and the amphibian took off at 3:00 p.m., and flew along the north shore of Hawaii to Hilo. Along this sixty-mile route can be found scenery whose beauty cannot be surpassed on earth. For much of the distance, the great volcanic mountain, Mauna Kea, flanks the course on the south and thrusts its 13,825 foot peak into the clouds. Sheer rock walls rise 800 to 1200 feet out of the most highly colored ocean to be found anywhere. Innumerable waterfalls drop hundreds of feet from one hard rock level to another. Narrow black gulches cut the rock wall at intervals and extend deep into the interior, forming small circular bays where they join the sea and wooded glens in their upper reaches. It is a sight that must be seen to be appreciated, and can be seen only from the air.

At Hilo the group used the municipal airport, which has a splendid hard, grass-covered coral surface with good approaches. There are no Air Corps activities or fuel at Hilo Airport. The Inter-Island Airways maintain a small passenger station and a hangar, and operate two regular schedules out of this field daily.

The territorial prison camp which flanks the Hilo field furnished guards for the airplanes of the group at Hilo. An interesting incident of the stop at Hilo was the discovery that the standard tie down equipment was ineffective. The standard stakes could not be driven into the coral. Efforts to do so resulted in badly bending the driving shafts without securing more than a few inches of penetration.

Awaiting the arrival of the Group at Hilo was the bus arranged for in advance to take the entire party to the Kilauea Military Camp, located on the brink of Kilauea Volcano, world's most convenient fire pit. As the party neared the volcano and saw the steam emanating from cracks in the earth, any doubt as to the activity of the volcano was dispelled.

The Rest Camp placed excellent quarters V-6885, A.C.

at the disposal of the party at a nominal price. This camp is maintained by the Hawaiian Department for its military personnel for a rest and recreation camp. It is nearly a mile above sea level and provides a temperature most exhilarating after several months' service at sea level.

On the morning of September 19th, the party was taken on a sight-seeing tour through the Hawaiian National Park, maintained by the National Park Service. The trip included visits to the lava tubes; fire pit and other points of interest. The volcano was not active during the visit of the 18th Group, but the privilege of seeing the Kilauea Fire Pit was conceded by all to be a high light in their tour of foreign service.

At about noon, the Pursuit took off from Hilo and the Attack from Upolu Point and proceeded around the "Big Island" in opposite directions on a 200-mile flight, involving an interesting interception problem. The type of country flown over was for the most part arid, unpopulated, without trails, new to all pilots and very different from any over which any members of the Group had ever flown before. Great lava flows extend from high up on the slopes of Mauna Kea to the sea in huge black, desolate, fan-shaped patterns, exposing their rough, flint hard surface as a dangerous hazard to landing - beautiful but awe inspiring. Only slightly less impressive from the air is the "Great Crack" - a black gash in the earth which runs for ten miles in practically a straight line - wide and deep - mute evidence of the terrific forces at work in the making of this new land.

Pursuit made a successful interception in the vicinity of South Point. Peculiar radio conditions were encountered. With the command sets it was impossible to communicate across Mauna Kea in any direction when the aircraft on either side were below the crest. Flying above the altitude of the peak, radio communication by voice was entirely satisfactory. The difficulty was directly attributable to the terrain, as two-way voice communication was satisfactorily maintained with the command sets between Wheeler Field and aircraft over Upolu Point, 160 miles away.

Pursuit spent the night of September 19th in camp at Upolu Point, and Attack was sheltered at the Kilauea Camp.

Reuniting at Upolu Point on September 20th, the Pursuit afforded special support to the Attack on the homeward flight to Oahu. The route lay along the south shore of Maui, then over Lanai, back to Molokai and then direct to Diamond Head. A few low clouds and some rain encountered enroute offered

no appreciable difficulty, and all planes landed at Wheeler Field on schedule after a delightful and instructive flight.

Personnel making the flight included Lieut.-Colonel John C. McDonnell, Group Commander; Majors Clayton Bissell, Group Operations Officer; Samuel G. Frierson, commanding the 26th Squadron; Ray H. Clark, commanding the 19th Squadron; Captains John C. Crosthwaite, commanding the 6th Squadron; Bryant L. Boatner, John E. Bodle and Richard H. Lee, Flight Commanders; Aubrey L. Moore, Engineering Officer, 75th Service Squadron; Lieuts. Kingston E. Tibbetts, Robert E. L. Pirtle, Russell H. Griffith, Ilwellyn O. Ryan, Karl Truesdell, Sidney Grubbs, Hugh H. Penland, Donald D. Arnold, James E. Briggs, George E. Price, Mills S. Savage, Thomas D. Ferguson, Robert H. Terrill and Douglas M. Cairns.

Staff Sgt. McCauley flew the amphibian. One cook, one radio operator and six mechanics were the enlisted complement carried on the flight.

---oOo---

AIR PROGRESS DAY DOWN SOUTH

With more than 100 landings and take-offs at the Municipal Airport at Atlanta, Ga., not a single mishap marred the Air Progress Day program on October 18th. Sightseers passed through the airport buildings all day, among whom were many boys and girls from grammar and high schools who showed marked interest in aviation.

A squadron of bombing planes from Maxwell Field, Ala., flew over Atlanta and landed at the airport at about 3:00 p.m., for inspection by visitors. At this time there was a parade of 30 planes over the city. At 4:00 p.m., there was a two-way short wave radio broadcast from a plane as it soared above the downtown section.

Probably the largest crowd appeared at the airport between 6:00 and 7:30 p.m., when there were four arrivals and three departures of giant airliners. The shops and terminal facilities of the Eastern and Delta airlines, the radio rooms and the weather bureau were open to the public all during the day.

Major-General George Van Horn Moseley, commanding the 4th Corps Area, spoke on aviation over the well known broadcasting station "WSB, Atlanta, Ga." at 10:15 p.m.

---oOo---

On Monday, September 30th, the Fifth Composite Group, stationed at Luke Field, T.H., took part in an "Aloha Flight" in honor of the Secretary of War, Hon. George H. Dern, upon his arrival in Honolulu aboard the Cruiser U.S.S. CHESTER. The Group conducted a ground inspection and Aerial Review for the Secretary of War on October 3rd.

V-6885, A.C.

SUCCESSFUL "WAR" AT LANGLEY FIELD

By the News Letter Correspondent

The war is over. While some foreign nations are still hard at their war games, the 2nd Wing of the GHQ Air Force has temporarily ceased operations so far as defending the country from the invading "Red" Forces is concerned.

Having received word on Sunday morning, October 5th, that foreign powers had combined to war against us and that their fleet was almost within striking distance of this country, the 2nd Wing began preparations for defense for this section of the Atlantic seaboard. The 33rd Pursuit Squadron, a unit of the 2nd Wing, did its share of the fighting and came through the war with one casualty. On Tuesday evening, October 8th, after a hard day of fighting against the enemy, Captain George F. Schulgen, while engaged in combat on the Post squash court, injured his back to such an ex-

tent that he was forced temporarily to relinquish command of the squadron, and was therefore carried as a casualty on the intelligence report for the war.

But now the war is over, it being decided that we would call it a draw, and the 33rd Squadron has settled down to its regular routine. Obviously the enemy has done the same, as we have heard nothing more of him since Thursday, on which day we attacked and destroyed his air base somewhere near Virginia Beach. The 33rd hangar was the nest for eleven P-26's of the First Pursuit Group from Selfridge Field, here for the defense of their country. These boys left for their home Field on Friday with, we hope, a few pleasant memories of their war at Langley Field. Evidently, the war was a success, for we have not received word to date to do it over again.

---oOo---

MILITARY AFFAIRS COMMITTEE MEMBERS VISIT SPOKANE

A C-30 Condor landed at Felts Field, Spokane, Wash., on October 15th, bringing Hon. John J. McSwain, Chairman of the House Military Affairs Committee, and his party of colleagues on an inspection of proposed sites in the Northwest for the establishment of a national air defense as provided for in the Wilcox Bill.

City, county and local military leaders welcomed the party, which arrived from Salt Lake City where, on the day previous, in company with Brigadier-General Henry H. Arnold, commanding the Pacific Coast GHQ Air Force, they inspected air base sites.

The necessity of reaching Seattle and Fort Lewis, Wash., made it impossible for the Congressional party to remain long in Spokane, but during their short stay they were shown sites for an air depot, two sites for a bombardment group, and were given instructions as to the location of three proposed bombing ranges on the Spokane-Seattle airway, about 120 miles from Spokane.

Congressman McSwain explained that his committee is without authority to either select or recommend the location of Air Corps units under the Wilcox Bill, but that the members were interested in the various sites proposed.

"Our sub-committee will make its record to the House Ways and Means Committee when Congress convenes again," Mr. McSwain stated, adding that he is looking ahead to the time when there will be underground hangars.

Landing at Felts Field was pleasant for Congressman McSwain and his party, because they were welcomed by Congressman Sam B. Hill, of Spokane, ranking member of the House Ways and Means Com-

mittee. The latter, it is recalled, introduced the bill for the establishment of an air depot at Felts Field.

At the request of the aviation and military affairs committees of the Chamber of Commerce, Major Robin A. Day, commander of the 41st Division Aviation, Washington National Guard, and Congressman Hill explained the features of the proposed sites.

Mr. Hill explained the various possibilities of the sites to the visiting Congressmen, while Major Day answered all questions relative to climate, type of soil, etc. The party were impressed with weather conditions and the weather information provided them covering the past several years. The weather information disclosed that during the last two years there were only three days when airplanes could not take off from Felts Field. It may be assumed that there was a feeling that the location of new airdromes should be where weather permits a maximum amount of flying.

A zero ceiling in Seattle and a 300-ft. ceiling in Portland prevailed up to the time the party left Felts Field. Weather conditions in Snoqualmie Pass in the Cascade Mountains were none too bright at that time. At Ellensburg, Wash., the party landed for the night after finding western Washington airport cities closed in. The trip to Seattle was continued the next day. The party also found it necessary to remain at Eugene, Oregon, for two days on account of bad weather.

Supporters of an air base in the vicinity of Spokane stressed upon the party the findings of the recent Fourth Army Command Post Exercise at Fort Lewis, where it was found that "40 percent of all troops and supplies would have to pass through Spokane's railroad net in case of a national emergency in the Northwest."

AIR DEMONSTRATION AT FORT LEAVENWORTH

A composite Squadron, consisting of four airplanes from each of the tactical units of the Second Bombardment Group, stationed at Langley Field, Va., performed a demonstration of Bombardment formation flying and bombing at Fort Leavenworth, Kansas, on Saturday, October 12th. Major Barney M. Giles, Commanding Officer of the 20th Bombardment Squadron, led the squadron in formation flying. Captains John H. McCormick, 96th Bombardment Squadron, and Robert F. Travis, 49th Bombardment Squadron, were flight leaders. First Lieut. Troop Miller, Jr., led the bombing team, with 1st Lieuts. Joseph A. Miller and David H. Kennedy flying wing positions. First Lieut. John R. Sutherland, in the lead ship, trained the bomb sight for the team with highly satisfactory results. Three 100-lb. and three 300-lb. bombs were dropped, all closely grouped around the bullseye.

The 1st Bombardment Wing was represented by three Martin Bombers from

Hamilton Field, Calif. The Third Attack Wing sent a number of A-12's and P-26's from Barksdale Field, La.

The demonstrations performed were very satisfactory and enlightening to the officers of the Command and General Staff School at Fort Leavenworth. The participating pilots expressed a desire to return again soon, for all had a good time, particularly at the dances given Friday and Saturday evenings by the officers of the post and the Command and General Staff School.

The flight to Fort Leavenworth was made in squadron formation in easy stages, stopping overnight at Dayton, Ohio, and Columbia, Mo. The return flight was made by single ships over various routes, giving the pilots individual training in aviation.

A special bombardment formation was put on for Movie News Reel on October 16th. The formation consisted of a composite squadron of nine airplanes, three from each of the tactical units of the 2nd Bombardment Group.

---oO---

AIR CORPS FIELD EXERCISES ON THE WEST COAST

California will be the scene of Army Air Corps peace time field exercises, November 3 - 17. All of the West Coast's Regular Army Air Corps and Coast Artillery (anti-aircraft) will participate. These problems will be held in widely scattered points in the San Joaquin Valley. Announcement of the plans for these important maneuvers were made by Brigadier-General Henry H. Arnold, Commanding General of the First Wing of the General Headquarters Air Force at his March Field headquarters.

A total of 131 Air Corps officers and 1348 enlisted men, with over 80 planes, will participate in the mimic air battles. Over 16 officers and 350 enlisted men are expected from the Coast Artillery.

"It will be assumed that an enemy force has invaded us from the South," explained General Arnold. "As we have a bombing and gunnery range at Muroc Dry Lake in the Mojave Desert, we are imagining that the 'invaders' have proceeded that far into the United States. Gunnery and bombing missions of the 1st Wing will be carried out on that basis. We expect that the value of Muroc Dry Lake as a practice area for air bombardment and ground strafing will be proved during these exercises."

Units participating in the 15-day sham battles are the 53rd Coast Artillery (Anti-aircraft) from Ft. MacArthur, Los Angeles Harbor, commanded by Lieut.-Colonel Homer R. Oldfield; the First Wing Headquarters Detachment, commanded by Lieut. Glen C. Moser; 17th Attack

Group, in command of Lieut.-Colonel John H. Pirie; and the 19th Bombardment Group, led by Lieut.-Colonel Howard C. Davidson, all from March Field, Calif.; and the 7th Bombardment Group from Hamilton Field, San Rafael, Calif., commanded by Lieut.-Colonel Clarence L. Tinker. All troops will be transported by Army trucks and motorcycles.

As large Army airports, such as March and Hamilton Fields would be the first targets of enemy airplanes, the units of the First Wing and the 63rd Coast Artillery will operate from "dispersed air-dromes" in the San Joaquin Valley under conditions approximating as closely as possible those to be found in actual warfare. This will be the first of a series of semi-annual field problems to be held by the GHQ Air Force on the West Coast.

Army authorities in Washington will be represented by the Commanding General of the GHQ Air Force, Brig.-General Frank M. Andrews, and his staff. General Andrews will make a thorough inspection of the maneuver camps.

The only organization from the Presidio of San Francisco will be the 91st Observation Squadron. This unit, though not a member of the GHQ Air Force, will take part in problems for three days.

Command post of the First Wing during the entire 14 days will be at Fresno. All of the Wing's movements will be directed from that city. The officers on General Arnold's staff will be Lieut.-Colonel Hubert Harmon, Executive; Major Ray A. Dunn, Supply; Captain Eugene H. Beebe, Adjutant and Public Relations Officer;

Captain Phillip Schwartz, Ordnance Officer; Captain Lloyd N. Watnee, Communications Officer; and Captain Joe L. Loutzenheiser, Assistant Operations Officer.

Troops of the 53rd Coast Artillery to take part will be 16 officers and 350 enlisted men from Batteries "A," "B" and "E," and Headquarters Battery. On November 3rd they will move by their own motor transport from Fort MacArthur to Mojave. Maneuvers will take place at Muroc Dry Lake and other places until November 9th, when the regiment moves to Bakersfield for First Wing problems to take place there. Camp will then be broken and the return made to Fort MacArthur on November 17th and 18th.

Headquarters of the 7th Bombardment Group will be at Merced for the whole maneuver period. Col. Tinker, commanding, will have as his staff officers: Major Kenneth D. Walker, Executive; Captains E.T. Noyes, Supply; J.W. Spry, Engineering; 1st Lieut. E.W. Suarez, Adjutant and Public Relations Officer. Officers commanding the Bombardment Squadrons will be Major John M. Davies, 9th; Major Carlyle H. Ridenour, 11th; and Major Harold D. Smith, the 31st.

Squadrons of the 7th Group will be dispersed to different points in the Valley. One bombardment squadron will move to Merced, another to Visalia and the third to Coalinga.

March Field's 17th Attack Group will have its headquarters at Bakersfield. Col. Pirie's staff officers will be: Major Early Duncan, Executive; Captains Minton W. Kaye, Supply; E.W. Alexander, Engineering; Charles B. Overacker, Communications Officer; and 1st Lieut. Jesse Auton, Adjutant and Public Relations Officer. Officers who will command Attack Squadrons during the war games are Majors Walter R. Peck, 34th; Louie C. Mallory, 73rd; and Captain John F. Wadman, 95th.

All three of the 17th Attack Group's "line" squadrons will also be assigned to different posts. One will go to Tejon, another to Lost Hills and the third to Taft.

All of Lieut.-Colonel Davidson's 19th Bombardment Group will be stationed at Delano for the entire period of the maneuvers. His staff officers will be: Major Westside T. Larson, Executive; Captains Wentworth Goss, Adjutant and Public Relations Officer, and Roger V. Williams, Supply Officer. Majors Albert F. Regenberger and James L. Grisham will command the 30th and 32nd Bombardment Squadrons, respectively. The 19th Group was transferred from Rockwell Field to March Field on October 25th.

Supply, transportation and general "service" will be the assignment of the Service Squadrons. Fresno will be serviced by the 69th Service Squadron from

Hamilton Field, commanded by Major A.G. Hamilton. Merced, 7th Group Headquarters, will be taken care of by the men of the 70th Service Squadron, also from Hamilton Field, and commanded by Major Devereux M. Myers. The 17th Attack Group at Bakersfield, Tejon, Lost Hills and Taft will be serviced by the 64th Service Squadron, in charge of Major Orin C. Bushey. The 76th Service Squadron, commanded by Major Carl W. Pyle, will be at Delano for the entire period, servicing the 19th Bombardment Group.

The only Observation Squadron in the First Wing, the 88th Observation from Hamilton Field, will be stationed at Wing Headquarters in Fresno for the maneuver period. There are six planes in the 88th.

Airplanes to be utilized in these maneuvers will be 20 Martin B-12 Bombers from the 7th Group, Hamilton Field; 39 Boeing P-12 planes from the 17th Attack Group, March Field, and 8 Martin B-10 Bombers from the 19th Bombardment Group at the same station.

---oOo---

FASTER PURSUIT AIRPLANES

Commenting editorially on the John L. Mitchell Trophy Race, held at Selfridge Field, Mt. Clemens, Mich., on October 19th, which was won by Captain Karl G.E. Gimmeler, of the 1st Pursuit Group, Air Corps, who piloted a Boeing P-26A Pursuit plane at an average speed of 212.9 miles per hour over the 100-mile course, the San Antonio EXPRESS is of the opinion that the next (12th) contest for this Trophy will probably show speeds around 225 miles an hour, and adds: "It would not be surprising were Pursuit ships able to fly 100 to 150 miles at 250 miles an hour developed within the next few years. Such planes are essential to gaining air control and must be faster than Bombers, Attack or Observation ships."

---oOo---

TWO MORE NEW WEATHER REPORTING STATIONS

Two new weather reporting stations, of interest to all pilots flying routes in the Third Corps Area, were established at C.C.C. Camps. These stations, operating at no expense to the government, cover what have previously been blank areas in the hourly weather map.

MSK, Skyland, Va., CCC Co. #334, Camp SNF-1, is located on top of Blue Ridge at 3500 feet altitude, about one mile southeast of Skyland Summer Camp and about 7 miles southeast of Luray. This station guards Washington and vicinity from the southwest, giving advance notice of the approach of storms from that direction. Also, Skyland is on the direct air route between Langley Field and Burgess Field or Pittsburgh.

MSH, Snow Hill, Md., CCC Co. #1318, Camp S-63, is located in woods at 20 feet altitude, about 4 miles southwest of Snow Hill V-6885, A.C.

on Maryland east shore. This station guards Washington and vicinity from the southeast, giving advance notice of fog and other dangerous weather moving in from the ocean. Also, Snow Hill is on the direct air route between Langley Field and Mitchel Field.

These stations will observe weather at the following times daily (except Saturday afternoons, Sundays and holidays): 7:40, 8:40, 9:40, 10:40 and 11:40 a.m.; 12:40, 1:40, 2:40, 3:40, and 4:40 p.m. Reports will be available at Bolling Field about 20 minutes after each observation, and will be added to the Mid-Eastern Air Corps Alert Net hourly weather broadcast.

---oOo---

TEMPORARY PROMOTION OF AIR CORPS OFFICERS

To Colonel:

Lieut.-Colonel John N. Reynolds assigned as Wing Commander, 19th Composite Wing, Albrook Field, Canal Zone, October 23, 1935.

To Lieut.-Colonel:

Major Frank H. Pritchard, commander of the Hawaiian Air Depot, Luke Field, T.H., Oct. 20.

Major Henry J. F. Miller, commander, 12th Observation Group, Brooks Field, Oct. 29th.

To Major:

Captain John C. Crosthwaite, commander, 6th Pursuit Squadron, Wheeler Field, T.H., Oct. 19.

Captain Alfred A. Kessler, Jr., commander, 56th Service Sqdn., Selfridge Field, Oct. 19.

Captain Kenneth N. Walker, Intelligence and Operations Officer, 7th Bombardment Group, Hamilton Field, Calif., October 20, 1935.

Captain Edward E. Hildreth, commander, 51st Attack Sqdn., Maxwell Field, October 20, 1935.

Captain Robert T. Zane, commander, 54th Bomb. Sqdn., Maxwell Field, October 20, 1935.

Captain Byron E. Gates, Chief of Pursuit Section, Air Corps Tactical School, Maxwell Field, Ala., October 20, 1935.

Captain Harrison G. Crocker, Engineering Officer, Air Corps Tactical School, Maxwell Field, Ala., October 20, 1935.

Captain James D. Givens, Basic Stage Commander, A.C. Primary Flying School, Randolph Field, Texas, October 27, 1935.

Captain Lloyd C. Blackburn, commander, 60th Service Squadron, Barksdale Field, Oct. 29th.

To Captain:

1st Lieut. Ralph E. Koon, flight commander, 14th Bomb. Sqdn., Bolling Field, Oct. 30, 1935.

1st Lieut. George R. Bienfang, supply officer, 60th Service Squadron, Barksdale Field, La., October 29, 1935.

1st Lieut. John T. Murtha, flight commander, 32nd Bomb. Sqdn., March Field, October 20th.

1st Lieut. Carl F. Damberg, flight commander, 97th Obs. Sqdn., Mitchel Field, Oct. 20th.

1st Lieut. Clarence F. Hegy, supply officer, 57th Service Sqd., Selfridge Field, Oct. 20th.

1st Lieut. David P. Laubach, flight commander, 1st Bomb. Sqdn., Mitchel Field, Oct. 20th.

1st Lieut. Marion Huggins, Intelligence and Operations Officer, 54th Bombardment Squad-

ron, Maxwell Field, Ala., October 20, 1935.

1st Lieut. Clayton E. Hughes, Intelligence and Operations Officer, 86th Observation Squadron, Maxwell Field, Ala., October 20, 1935.

1st Lieut. Carl R. Storrie, engineer officer, 84th Service Squadron, Maxwell Field, Oct. 20.

1st Lieut. George E. Price, flight commander, 19th Pursuit Sqdn., Wheeler Field, Oct. 30th.

1st Lieut. John N. Stone, flight commander, 19th Pursuit Sqdn., Wheeler Field, Oct. 20th.

To 1st Lieutenant:

2nd Lieut. Ray W. Clifton, armament officer, 5th Bomb. Sqdn., Mitchel Field, October 20th.

2nd Lieut. Thomas F. Langben, armament officer, 1st Bomb. Sqdn., Mitchel Field, Oct. 20th.

2nd Lieut. Robert E. Jarmon, armament officer, 70th Service Sqdn., Hamilton Field, October 27, 1935.

---oOo---

The duty assignments of the following-named Air Corps officers, holding temporary increased rank, were changed. No change of station involved and officers retain temporary rank:

Major Carlyle H. Ridenour from 7th Bombardment Group to commander, 11th Bombardment Squadron, Hamilton Field, Calif., Oct. 19th.

Major Warren A. Maxwell from 56th Service Squadron, Selfridge Field, to commander, 27th Pursuit Squadron, October 20 1935.

Major Arthur G. Hamilton from 11th Bombardment Squadron to commander, 69th Service Squadron, Hamilton Field, October 20, 1935.

Captain Donald T. Arnold from 19th Pursuit Squadron to flight commander, 26th Attack Squadron, Wheeler Field, T.H., October 20, 1935.

Captain John A. Tarro, from 21st Airship Group, Scott Field, Ill., to Intelligence and Operations Officer, 9th Airship Squadron, Oct. 20.

Captain Kingston E. Tibbetts from 18th Pursuit Group, Wheeler Field, to flight commander, 6th Pursuit Squadron, October 20, 1935.

Major William N. Amis from 60th Service Squadron to commander, 90th Attack Squadron, Barksdale Field, La., October 29, 1935.

Captain Philo G. Meisenholder, from 60th Service Squadron, to flight commander, 8th Attack Squadron, Barksdale Field, October 29, 1935.

Captain Fred C. Tally from 8th Attack Squadron, to engineer officer, 60th Service Squadron, Barksdale Field, La., October 29, 1935.

1st Lieut. P. Ernest Gabel from communications officer, 25th Bombardment Squadron, to armament officer, that squadron, France Field, Oct. 26.

1st Lieut. Robin B. Epler from communications officer, 7th Observation Squadron, to supply officer, that squadron, France Field, Oct. 26th.

---oOo---

The following-named officers were relieved from assignment, duty and temporary rank, and directed to report to commanding officer of field designated for duty with GHQ Air Force:

Capt. John J. Morrow, Intelligence and Operations Officer, 9th Bomb. Squadron, Hamilton Field.

Capt. Wm. C. Mills, supply officer, 60th Service Squadron, Barksdale Field, La.

Capt. Lawrence C. Westley, supply officer, 3d Attack Group, Barksdale Field, La.



AIR CORPS FIELDS

Randolph Field, Texas, October 17th.

Randolph Field entertained quite a number of distinguished visitors during the last month. On September 23rd, the post was visited by a Congressional party composed of the following members of Congress: Hon. Tilman P. Parks, Arkansas; Hon. Thomas S. McMillan, South Carolina; Hon. John S. Dackweiler, California, and Hon. Maury Maverick, Texas. A luncheon was served at the Officers' Club in honor of these distinguished guests, which was attended by a large number of the post personnel and officers and ladies from nearby Army posts.

On October 1st, we were visited by a Mexican Military Mission, headed by Lieut.-Colonel L. Alamillo Flores, and including Major A. Lozano Bernal, Captains L.R. Casillos, A.G. Talfan and P. Grayales, of the Mexican Army. The visitors were met by General Chaney and then taken on a tour of inspection of the various school activities by Lieut.-Colonel L.N. Keesling.

On October 14th and 15th, Group Captains H.G. Smart and T.E.B. Howe, of the British Royal Air Force, were here studying our training system. Group Captain Smart has charge of the British Royal Air Force training activities, while Group Captain Howe is the Air Attache to the British Embassy at Washington.

Colonel Harms, the commanding officer, returned from a month's leave on October 9th. He visited points of interest in Mexico and reported Mexico City an ideal place in which to spend a vacation.

Randolph Field captured the Army League Baseball Championship for the third successive year. At the close of the regular season, the Randolph Field Ramblers and the 9th Infantry Manchus were tied in games won and lost. In a three-game series to determine the championship, Randolph Field won the first contest by the lopsided score of 14 to 2, lost the second 7 to 3, and came back with an old fashioned ninth inning rally to capture the final game, and with it another baseball trophy for the trophy case in the Administration Building.

Immediately following the close of the baseball season, candidates were called out for football practice by Lieuts. 'Bunky' Day and

"Put" Inlay, coaches. The 75 who reported for the first practice were cut down to a squad of 40 men by the end of the first week. Among these 40 candidates are a considerable number of young recruits, which is making competition keen among the old members of last year's team for positions on this year's eleven. Opening the season, after three weeks practice, with the St. Mary's University team, the Ramblers, although losing 20 to 0, made a very creditable showing for their first game against a foe playing their fourth game. The game was played under a broiling Texas sun before a crowd of five thousand fans.

Randolph Field will meet Texas University "B" Squad before opening the Army League on October 30th with Kelly Field, last year's champions. High hopes are entertained for annexing this year's championship in football.

Hamilton Field, San Rafael, Calif., Oct. 14th.

The Noncommissioned Officers' Club conducted its first social event of the season on the evening of October 5th at the American Legion Hall at Petaluma. The affair took the form of a Barbecue and Dance. Refreshments were served. The dance served the dual purpose of allowing the noncommissioned officers and ladies who have been stationed here for some time to get together and talk things over, and of introducing the new arrivals from the plains of Texas, our comrades of the 88th Observation Squadron, to the older residents of the post.

Captain Donald J. Kiern, accompanied by Staff Sgts. George H. Carpenter and Delno W. Ross, proceeded by air to the Naval Proving Grounds, Dahlgren, Va., the first named to pursue a special course in bombing, and the noncommissioned officers to undergo a course of instruction in the mechanics of bomb sights.

Lieut.-Colonel C.W. Russell was appointed Post Executive, vice Major W.B. Hough, relieved.

Major W.B. Hough, Captain C.B. Stone, III, Air Corps, and 1st Lieut. Stanley J. Reilly, Chaplain, were appointed members of the Hamilton Field Recreation Committee.

Flying Cadets from the graduating class of Kelly Field who were assigned to Hamilton Field were Richard T. Kight, William J. Moser, Edward L. Reid and John M. Reynolds.

Captain Richard I. Dugan was appointed Secretary-Treasurer of the Officers' Club, vice Chaplain Stanley J. Reilly.

First Lieut. W.M. Garland, Air Corps, was appointed Assistant Post Transportation Officer, vice 2nd Lieut. J.P. Bohl, Air Reserve, relieved.

Major A.G. Hamilton was granted a month's sick leave, beginning October 9th.

Staff Sgt. George Woskow, 7th Bombardment Group Hqrs., assumed the duties of Group Sergeant Major, during the absence of Technical Sgt. Wm. J. Riley on furlough.

A.C. Tactical School, Maxwell Field, Ala.

All personnel of Maxwell Field were called upon in a recent Welfare Drive conducted in Montgomery for the various charitable organizations organized there, and a substantial amount was contributed by the officers, enlisted personnel and civilians on duty at the Tactical School.

After spending a considerable time in Walter Reed General Hospital and on sick leave, Major Benjamin F. Harmon, Coast Artillery Corps, returned to his duties at the Tactical School.

Lieut.-Col. Herbert A. Dargue, Assistant Commandant of the School, has been sick in the Post Hospital recently and is at present confined to his quarters. Captain Arnold H. Rich, commanding officer of the A.C.T.S. Detachment, is also sick in the Post Hospital at this station.

Major Thomas L. Gore, Post Flight Surgeon, is attending a two months' course in advanced Medical Field Service at Carlisle Barracks, Pa. Captain William H. Lawton, Medical Corps, is acting Post Flight Surgeon and Commanding Officer of the Medical Detachment during Major Gore's absence.

Donald S. Williams, popular Top-Kick of the 51st Attack Squadron, who served as 1st Sergeant of the A.C. Tactical School Detachment for the past year, received orders recently ordering him to a tour of foreign service in the Hawaiian Department, replacing 1st Sgt. Harry W. Alexander, A.C. Sgt. Williams has served with the Tactical School for a long time in several capacities and will be sincerely missed. Sgt. Alexander will be welcomed back at Maxwell Field by his many friends.

Captain Clayton E. Hughes was appointed E. & R. Officer and Post Athletic Officer in addition to his other duties, relieving Capt. Frank F. Everest, Jr.

Major Claire L. Chennault was transferred from command of the A.C.T.S. Detachment to the command of the 84th Service Squadron, relieving Major Arnold H. Rich, who reverted to his permanent rank of Captain, assuming the duties of commanding officer of the A.C.T.S. Detachment.

First Lieut. Edward J. Hale is the proud father of a baby girl, born at the Post Hospital on October 17th, and weighing 8½ lbs. Cigars were produced forthwith to celebrate

the arrival and, incidentally, the first in the Hale family.

All of the track men as well as the heavy-weights in the squadrons made preparations for the big Track and Field meet scheduled for October 25th. The 1st Sergeants, having failed to practice for their race, made matters worse for themselves, since the Athletic Officer planned on changing their yardage from the 50 mark up to about 200 yards to see how far the over-weight participants can last. The heavy-weights, preparing for the tug-o'-war, evidently worked for a lost cause, in view of the claim of the A.C.T.S. Detachment that this event was in the bag, considering the fact that they have three heavies totalling some 900 pounds.

Corporal Vey N. Helman, A.C.T.S. Detachment, and serving as School Sergeant Major for the past several years, was discharged recently and found physically unfit for reenlistment. All of the personnel of the School regret his loss and join in wishing him much success in his future endeavors.

The 51st Attack Squadron held a stag outing at Hotel Camp Dixie on beautiful Martin Lake on October 12th and 13th. Located on the north shore of Martin Lake, near Alexander City, Ala., some 50 miles from Maxwell Field, the Hotel, originally part of the Tuskegee Institute, has been used as a summer resort for a number of years. Martin Lake, Alabama's largest body of water, is surrounded by summer cottages and estates and is a most popular playground.

Nearly all of the total of 65 members of the Squadron attended. Rooms were provided and excellent meals were served. Power boats and row boats were made available by the management and were used constantly. The weather was perfect, with the mercury in the high eighties on Saturday afternoon. Conditions were favorable for swimming, but the recent cold snap had resulted in nearly everyone putting his bathing suit in moth balls.

Due to the kind cooperation of the other organizations at Maxwell Field, the 51st men on guard and hangar duty were replaced by men from other organizations.

The fact that the outing was held some distance from the station was novel and all voted that "a great time was had by all." The outing permitted the entire organization, both married and single members, to get together for 24 hours without the medium of military formations.

Captains E.E. Hildreth and Frank F. Everest, Jr., are on duty with the organization, and Staff Sergeant Louis E. Gagnon is acting First Sergeant.

Bolling Field, Anacostia, D.C., Oct. 16th.

General Andrews flew into Bolling Field on October 9th in the Air Corps' first new Douglas Transport.

Major R.L. Walsh, Captain R.C.W. Blessley, Air Corps, and Captain Merchant, Air Reserve, attended the annual convention of the Reserve Association at Louisville, Ky.

Luke Field, T.H., October 3rd.

During the course of the recent visit to Hawaii of the Congressional party, headed by the Hon. Tilman B. Parks, the Congressmen met at the Post Gym different men from the States they represented. To those who have been in Hawaii some little time, this meeting helped to recall their native State and acquaint them with the man sent to Washington to represent its interests. Some few from Arkansas were a little hazy on recollecting their birthplace, also one or two from Texas. Private Bobo, through no fault of his own, had been under the impression that Jersey was a good place to be from until the records in the orderly room pointed to the Lone Star State. I've often heard Bobo speak of Texas and the invigorating atmosphere there that builds men from odds and ends and old spare parts of humanity. According to Private Bobo, many of our best shots came from Texas. "Nawzzzer," they don't do things half way down in Texas.

On Thursday, October 3rd, the Fifth Composite Group conducted a ground inspection and Aerial Review for the Secretary of War at 11:00 a.m. The inspection party arrived by boat about 11:00 a.m., and were met by the Commanding Officer, Lt.-Col. Asa N. Duncan and staff. The inspection party were then shown around Ford Island by automobile, after which they drove to the flying line to inspect the planes and Group transportation. Leaving Luke Field for Fort Weaver by boat, the Group passed in review over the Secretary's launch in the middle of Pearl Harbor.

Wheeler Field, T.H., October 3rd.

At a parade of the entire 18th Pursuit Group on September 28th, the Group Athletic Supremacy Trophy was presented to the 6th Pursuit Squadron for the second consecutive year. When the Group had been formed, the new commander, Lieut.-Colonel John C. McDonnell, made the presentation to Captain John C. Crosthwaite, commanding the 6th.

At the same formation, 1st Lieuts. L.O. Ryan and N.E. Powell were presented with sweaters with the Group insignia as a token of appreciation of their work as coaches of the Group baseball team, which made such a creditable showing in the Schofield Baseball League during the 1935 season.

First Lieut. R.H. Griffith was presented with the trophy he won as runner-up in the Murphy Tennis Trophy Tournament.

Group personnel who received baseball awards as members of the Group baseball squad were Corp. Nixon, Pvts. 1st Cl. Jungman and Germaine, Pvts. Hammond, Soeder, Quigley, Witkus and Walsh, 6th Pursuit Squadron; Sgt. Swaner, Corp. Skaane, Pvts. Cheesman and Myers, 19th Squadron; Pvts. Ward and Hollister, 26th Squadron; Pvts. Horn, France, Butscher, Bickford and LaSeur, 75th Squadron, and Pvts. Judra and Griffith, Group Headquarters Detachment.

Hawaiian Air Depot, Luke Field, T.H., Oct. 3.

Enlisted personnel of the Hawaiian Air Depot "went over big" on the occasion of the recent Departmental Review at Schofield Barracks in honor of visiting members of Congress. Many people were of the opinion that these men, who normally spend their time behind a machine shop lathe and perform other work connected with purely Engineering and Supply matters, would be of little use on a parade ground, but these members of the so-called "Royal American Hawaiian Air Depot" more than distinguished themselves by their smart and soldierly appearance during this review. At this writing, these men are busily engaged in polishing up their brass and preparing themselves for the "Review of Reviews" to be held in honor of the Secretary of War.

The enlisted men of the Hawaiian Air Depot are sometimes called "Forgotten Men," but when the sound of the bugle is heard and the bands begin to play they are anything but forgotten and are at the forefront in the affairs of the day. Seriously speaking, this Detachment deserves considerable praise for its showing when it is considered that they have little time for practice drills. More could be said along these lines, with special reference to their loyalty and willingness to work under conditions that are, at times, most trying. Far from the glamour of the flying line, these men have performed outstanding service, working side by side with the fullest cooperation with civilian employees of the Depot.

A number of changes have taken place in the Depot Supply Department due to increased personnel strength. On the other hand, we have had several losses. Mrs. Rose L. Pulsifer, who has been employed in this Depot for the past 22 years as Assistant to the Purchasing Clerk, has resigned. Miss Faye Northrup, Air Corps employe for the past 18 years, has submitted a request for an extended leave to return to continental United States, due to ill health. Miss Northrup was transferred to this Depot from the Little Rock Depot in 1929, and has proven a most valuable employee to this organization. It is with regret that we learn of the necessity for Miss Northrup to leave, and the personnel of the entire Depot wish her Bon Voyage and a rapid recovery of her health and return to duty.

The Depot Supply Department recently received a large shipment of parts from the mainland. This freight weighed over 200,000 pounds and was unpacked and stored away in record time. This department is continuing its unusual activity of the last few months, making an effort to bring all stocks up to proper levels and reducing the number of so-called "critical items," the lack of which has materially slowed up production in the past.

Captain Oscar F. Carlson completed two years of duty with the Hawaiian Air Depot and sailed for his new station, Chanute Field, on the "Lurline," leaving Honolulu September 29th. Captain Carlson's departure is regretted by all

Depot personnel who have come in contact with him, and the crowd bidding him "Aloha" attested to the popularity of this young Air Corps officer.

Replacing Captain Carlson as Chief Inspector, Test Pilot and Assistant Engineering Officer, Captain Harvey F. Dyer was transferred to this organization from the 26th Attack Squadron at Wheeler Field and assumed his new duties on October 2nd.

Due to the vagaries of the transport schedules, production during September dropped off considerably, the final tally showing but 5 airplanes and 8 engines overhauled that month. Although a huge shipment of supplies was received in September, and another similar shipment is expected late this month, considerable anxiety is being felt because of the possible tie-up of shipments due to pending strikes of longshoremen on the West Coast. It is not known whether these strikes will involve Army transports or not, but it is a fact that material which we urgently need and on which commercial shipment has been authorized is being delayed considerably due to tie-up of freighters in San Francisco.

San Antonio Air Depot, Texas, Oct. 19th.

Colonel and Mrs. John H. Howard returned October 7th from a two months' leave of absence, during the course of which they visited Hawaii.

Captain J.H. Hicks departed for his new station October 15th with Mrs. Hicks and family. He has been stationed here since June 30, 1934, on duty as Assistant Depot Supply Officer. The Depot personnel greatly regret to see them go, and wish them all success and happiness at the Fairfield Air Depot.

Mrs. Lois Redman, widow of the late Lieut. Mark H. Redman, and hostess of the Officers' Club and the Golf Club at this station for the past five years, left the first part of October for Randolph Field, having accepted a new position as hostess at that station. Mrs. Redman will be missed from the Depot's social circle, whose cordial wishes accompany her in her new activity.

Recent visitors by air at the Depot were Capt. Wm. L. Boyd, A.C., with Lieut.-Colonel Herman Kobbe, 7th Cavalry, Fort Bliss, Texas, as passenger, Oct. 12th, for engine change in an O-25 - Majors Wm. A. Hayward and E.W. Anderson, from Chanute Field, Oct. 14, ferrying a BT-2A back to that station - Capt. D.G. Stitt, from Fort Sill, Okla., Oct. 17th to ferry back an O-19E airplane - Captain J.C.A. Denniston, Lieuts. C.B. Dougher and T.M. Melden, Jr. (Res.) from Mitchel Field, N.Y., and Capt. Wm.C. Bentley, Jr., from Langley Field, Va., Oct. 18, to ferry a PT-3 and a PT-3A to Langley Field and two PT-3's to Mitchel Field.

---oOo---

On October 20th, 1st Lieut. Mills S. Savage was relieved from assignment at the Hawaiian Air Depot and placed on duty as engineer and armament officer of the 18th Pursuit Group, Wheeler Field, with the temporary rank of Capt.

1st Lieut. Lauris Norstad has been ordered to duty with the GHQ Air Force at Mitchel Field, N.Y., upon the completion of his tour of foreign service, his previous assignment having been revoked.

The following-named officers, recent graduates of the Advanced Flying School, Kelly Field, Texas, and who were assigned to duty at Rockwell Field, Coronado, Calif., received orders changing their assignment to March Field, Calif., in view of the abandonment of Rockwell Field by the Air Corps:

Second Lieutenants George B. Dany, William M. Gross, Paul T. Hanley, John deP.T. Hills, Elvin S. Ligon, Jr., Arno H. Luehman, Lawson S. Moseley, Jr., Wilson H. Neal, Curtis D. Sluman, William S. Stone, John W. White and Albert T. Wilson, Jr.

---oOo---

Warrant Officer Frank Bahel was relieved from duty at Burgess Field, Uniontown, Pa., and assigned to duty with Air Corps at the Middletown Air Depot, Middletown, Pa.

Warrant Officer Thornton C. Fitzsimon was relieved from duty at Langley Field, Va., and assigned to duty with the Air Corps at Burgess Field, Uniontown, Pa.

---oOo---

AVIATION DATA WANTED FOR RAINBOW DIV. HISTORY

A history is being written of the 42nd Division, better known as the "Rainbow Division," in which an effort is being made to include accounts of the service of corps and army units which were with it in its different combats. In the material now on hand there are a number of stories from the Infantry and Artillery about aviation but, as yet, nothing from the aviation to tell what they thought of the Infantry and Artillery. Besides this human interest side, it is desired to bring out the serious technical side of aviation.

Any reader of the News Letter who may be in possession of information regarding aviation incidents or missions connected with the operations of the 42nd Division will aid in a very material way this worth while effort to compile a full and complete history of this famous World War organization by sending such data to the Information Division, Office of the Chief of the Air Corps, Washington, D.C.

---oOo---

AN ACKNOWLEDGMENT

The News Letter is indebted to Mrs. Marguerite Jacobs Heron and Mr. Bob Fitzgerald, both of the Technical Data Section, Materiel Division, Wright Field, for the assistance they rendered in the preparation of this issue - Mrs. Heron for her excellent article on the Aeronautical Museum, and Mr. Fitzgerald for the artistic cover design he drew up to go with it.

---oOo---

The News Letter would appreciate hearing from Barksdale, Mitchel, Scott and Chanute Fields.

V-6885, A.C.

TECHNICAL INFORMATION AND ENGINEERING NEWS
Air Corps Materiel Division

Pilot-Compass Interlocking Relay Units.

Preliminary report on flight tests to determine characteristics of Air Corps and Sperry types of pilot-compass interlocking relay units has been prepared. The relay mechanism (designed, built and tested at the Materiel Division) which interlocks the radio compass, Type E-4, and the Sperry automatic pilot, to bring about automatic steering to a selected radio station, was initially flight tested August 28, 1935. A similar relay (designed, built and tested by the Sperry Gyroscope Company) was flight tested by representatives of the Air Corps on September 7, 1935, at Newark, New Jersey. All flight tests conducted to date have been satisfactory, although not complete. Further tests are contemplated and detail report will be made at that time.

High-Tension Ignition Cable.

The American Steel & Wire Company, Worcester, Mass., has requested permission to submit for test a sample of a recently developed type of high-tension ignition cable which, it is claimed, is more resistant to flame than the present standard type.

Rubberizing Winter Flying Shoes.

A representative of the Materiel Division recently visited the B.F. Goodrich Rubber Company, Akron, Ohio, with reference to rubberizing winter flying shoes. This company is developing a preparation for waterproofing sheep shearling, and is also working on a non-skid rubber sole for winter flying shoes, and will submit samples for test in the near future.

Experimental Pneumatic Raft.

A new bladder-type pneumatic raft, fabricated by Air Cruisers, Inc., New York City, is considered satisfactory for service test. This raft is composed of a rubberized duck outer tube casing, containing two latex bladders as the supporting medium, and should have a considerably longer service life than the present rubberized fabric rafts.

---oOo---



AIR CORPS NEWS LETTER

ISSUED BY
THE OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON

VOL. XVI
NOVEMBER 15, 1935
No. 21

F. L. TEMPLE, O. C. A. C. 10-13-35

NEWS LETTER

Published by the

Board of Directors

of the

Information Division
Air Corps

November 15, 1935

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

THE CRASH OF THE BOEING BOMBING PLANE

By the Wright Field Correspondent

On October 30th, Wright Field was the scene of one of the most serious accidents ever occurring to Air Corps equipment. The new four-motor Boeing Bombardment airplane brought to the Materiel Division on August 20th, as an entry in the Bombardment Procurement Competition, crashed upon take-off for a test flight and burned, costing the life of Major Ployer P. Hill, Chief of the Flying Branch, and injury to the others of its crew.

In the airplane at the time, in addition to Major Hill, were Lieut. Donald L. Putt, test pilot; Leslie Tower, Boeing test pilot, who had flown the big plane non-stop from Seattle to Wright Field; John Cutting, Wright Field test observer; and Mark Koogler, Wright Field mechanic. Cutting and Koogler, who were in the cabin, left the plane immediately upon landing. Somehow, Lieut. Putt managed to get out of the cockpit. Of the four survivors, Tower was the most seriously injured. His condition, though at first grave, seems favorable at present, and the progress of the others is satisfactory. Major Hill lived only for about three hours after the crash.

Occurring as the accident did directly on the field, immediate aid was possible, and it speaks well for the organization of all forces that aid was supplied without loss of time in this dire emergency. The fire department was on the scene almost immediately. The ambulances arrived before Major Hill and Mr. Tower could be gotten from the cockpit. Willing hands lent aid at great personal risk. Indeed, the caliber of bravery shown in that desperate hour was the type of which an organization may well be proud. Mr. Tower, who had been standing in the cockpit and was not strapped in, was lifted unconscious through the smashed windshield windows and a rupture in the cockpit top, and eased over the side to the ground. Lieut. R. K. Giovannoli entered the flaming cockpit and had to cut free Major Hill's shoe before he could lift him through the top where willing hands took the burden. Officers and civilians worked shoulder to shoulder, the slippery fire extinguisher fluid making every grasp difficult, every touch of clothing or hot metal meaning

a burn.

So swift had to be that aid, and so quiet about their burns have been those who escaped the need of actual hospital treatment, that the names will probably never be known of all those whose courage overcame the terror of that moment in rescue work of the most desperate kind. Lieuts. Giovannoli and L.F. Harman had to be taken to the hospital.

Among the first acts of General Robins, upon being called to the scene of the crash, was the naming of the Accident Investigation Board of four officers - Lieut.-Colonel Frank D. Lackland, Captains J. M. Gillespie, L.C. Craigie and H.C. Bogert, to determine the cause of the crash. This promptness enabled an immediate examination before the ground or plane could be greatly disturbed. Although dozens of witnesses were interviewed by the board, it was almost a week before physicians permitted those who had been in the airplane to be questioned. Since they are all seasoned test flight men, a definite determination of the cause can undoubtedly be arrived at.

The Boeing will be missed in its shining beauty on the flying line, but another Boeing can be built. Irreparable, however, is the loss of Major Hill, soldier, gentleman, and air pilot, whose years of experience in flying, cool judgment, courage, skill, and joy in his work gave him an easy and natural leadership among the test pilots whose chief he was. It is many a long day since Wright Field has known so great a pall of sorrow. It will be long before our loss is forgotten.

Major Ployer P. Hill was born in Newburyport, Mass., October 24, 1894. He attended grammar school and high school in his native city and, after pursuing an engineering course at Brown University, graduated in the year 1916, and from that time until his entry into the military service during the World War his occupation was that of civil engineer. Upon his enlistment in the Aviation Section, Signal Corps, December 4, 1917, he was sent to Cornell University, Ithaca, New York, for his ground school training. Following his graduation in April, 1918, he was on duty for a brief period of time at the Aviation Concentration Camp at Camp Dick, Dallas, Texas, and he was then transferred to

Chanute Field, Rantoul, Ill., for flying instruction, which he completed in July, whereupon, on July 31, 1918, he was commissioned a second lieutenant. Assigned to active duty at Chanute Field, he remained there for two months and was then transferred to Ellington Field, Houston, Texas, to undergo instruction as a Bombardment pilot. At this station Major Hill performed the duties of radio officer until March, 1919, when he was transferred to duty in Washington in the Contract Section, Supply Group, Office of the Director of Air Service. In June, 1919, he was assigned to duty in the Training and Operations Group. He received his appointment as a 2nd Lieutenant in the Air Service, Regular Army, July 1, 1920, and was promoted to 1st Lieutenant the same date.

In August, 1920, Major Hill was ordered to duty with the American Army of Occupation in Germany, and from September of that year until July of the following year he was on duty as Engineer Officer of the Air Service Flying Station at Weissensturm, Germany.

Upon his return to the United States, he was assigned to duty with the 12th Aero Squadron at El Paso, Texas. In February, 1923, he was transferred to Chanute Field, Rantoul, Ill., to undergo a course of instruction in aerial photography. He completed this course the following August and remained on duty in the Department of Photography of the Air Service Technical School at Chanute Field until June, 1924, when he returned to duty in Washington, being assigned to the Training and War Plans Division, Office of the Chief of Air Service.

In May, 1925, he was ordered to duty at Mitchel Field, New York, and he remained at this station as commanding officer of the 14th Photo Section until November, 1929, when he was ordered to duty in the Philippines, being stationed at Nichols Field.

Completing his foreign service tour in the Islands where, for the most part, he was in command of the 6th Photo Section, he returned to the United States in May, 1932, for duty at Wright Field, Dayton, Ohio. He served as test pilot and as Assistant Chief of the Planes and Engines Maintenance Unit. On July 29, 1935, he was assigned as Chief of the Flying Branch, Materiel Division, with the temporary rank of Major.

Major Hill's cheerful disposition and his unfailing courtesy at all times gained him many friends who greatly mourn his untimely demise. The Air Corps lost an efficient officer and one of its most outstanding and skillful pilots. The sincere sympathy of the Air Corps is extended to his sorrowing widow and his other relatives.

Major Hill died in the service of his country striving to advance aviation.

SMOKE SCREEN DEMONSTRATION BY 37TH ATTACK

The 37th Attack Squadron of Langley Field, Va., turned out six ships to make the trip to the Aberdeen Proving Ground on October 2nd. Aberdeen was the gathering point of the Ordnance Department, members of the Society of Mechanical Engineers and their guests in order to witness the demonstration of all the Ordnance equipment of the United States Army. All types of armament were demonstrated to the crowd of approximately 5,000 persons.

The demonstration by the A-8 Attack planes proved to be very interesting. Three ships, each having two tanks of smoke, laid down a screen while in formation, and effectively screened the entire landing field for a period of three minutes.

The offensive power of the Attack plane was displayed in the bombing and gunnery to no small degree. While in a formation of three planes, ground targets were attacked, using four guns per plane, and the strafing power of this type of plane was ably demonstrated. While on the same mission, thirty bombs of the 30-pound fragmentation type were dropped in two passes at a target from an altitude of 1,000 feet. This mission was also successfully completed, the grouping of the bombs being close and well placed.

As an additional demonstration, the 37th Attack Squadron went to Edgewood Arsenal and performed a mission for the benefit of the class of Naval officers attending the School in Chemical Warfare. One Attack plane came across the Bush River and laid a smoke screen upwind from a Navy boat. Then a plane loaded with tear gas came in through the screen and attacked the boat. Following this came two planes loaded with red dye representing mustard gas. The Naval officers on the boat were well protected with masks and other equipment, which was quite necessary, as the red dye coated the vessel and personnel very noticeably.

The Air Corps personnel making the trip consisted of Captain Schramm, Lieuts. McLennon, Grussendorf and Qualm, Flying Cadets Amspaugh and Thomas, Master Sergeant Nero, Staff Sergeants Hoahland, House, Adams and Miller, Sergeant Gott, Privates Smith, Cassel and Gangemi. Some of the enlisted men made the trip by auto.

---oOo---

NIGHT FIRING BY 35TH PURSUIT SQUADRON

The 35th Pursuit Squadron, Langley Field Va., conducted night firing on October 14th, using 30 calibre and 50 calibre tracer bullets upon ground targets. Flares were used to illuminate the targets. The practice as a whole was very successful and gave the pilots experience in attacking ground forces at night.

---oOo---

FILERS DEPEND UPON "EARTHWORMS."

THE ground preparations for the Stratosphere Flight suggest the dependence of flight upon the men who stay on the ground.

At 6:00 a.m., Armistice Day, in the National Geographic Society Headquarters, we are listening to a radio account from the Rapid City bowl describing the ground

preparations for the third attempt at a stratosphere flight under the auspices of the Geographic Society and the Army Air Corps.

The great balloon has received about two hundred thousand cubic feet of helium, and forty thousand more are ready to be put in when the air-tight steel gondola is attached. The extensive ground preparations which have been necessary for this flight remind us that in all flying the ground installations and personnel are quite as essential as those taking the air.

The organization of the ground installations required to support the operations of an air force will never be static for any considerable period of time. Each forward step in the development of airplanes, airplane engines and plane equipment of the Air Force requires some modification, sometimes drastic, at other times minor, of the servicing equipment on the airdromes.

Major developments in the tactics and strategy of the employment of air forces usually impose changed or new requirements upon the ground personnel and equipment. In a science which develops as rapidly as flying has developed in the past two decades, the school system pertaining thereto assumes great importance. It is in the laboratory and schoolroom that many improvements in equipment, new equipment, tactics and strategy are devised. From the very nature of war tactics, there are so many limitations upon service testing of ideas that a great part of the air tactics, as developed to date, must await the test of the next war, in order for their value to be fully determined.

This being true, it is seen that we shall enter the next conflict depending upon much that has undergone only the test of the school room and the laboratory. The responsibility which rests upon these peacetime activities is therefore a grave one. The fullest and widest range of study and experimentation are required in the theory and development of tactics and equipment which cannot be fully service-tested except in the crucial test of battle.

On the other hand, to take the attitude oftentimes assumed by those who have given relatively little study to

these matters, namely, that we should hold fast to that which has been proven in battle and reject that untried by this flaming test, would, if adopted, leave us at a complete disadvantage in a conflict with those who have pressed their aeronautical development.

Realizing this, airmen have strongly and consistently resisted all efforts to force this stand-pat attitude upon them. They resolutely turn their faces toward the future and press onward to a greater and still greater progress. This resolution on the part of fliers is obtaining splendid results. It is due to this type of flier that we now have airplanes capable of a speed of 424 miles an hour; of 6,200 miles non-stop flight on one fueling; of 40,000 feet altitude, and of fifty-five tons lifting capacity.

These powers represent a tremendous advance over the airplanes which received the stern test of battle in the World War. They are a glorious monument to the vision and perseverance of intrepid airmen. They represent the best efforts of many devoted men who have cheerfully made the supreme sacrifice in furtherance of the things they believed in.

Even as this is written in the stratosphere headquarters of the National Geographic Society in Washington, we are listening to the account of the last minute checks being made by two representative airmen who are once again about to forge upward into the relatively unknown realm of the stratosphere in order that its secrets may be secured to the further advantage of flying.

Earlier in the night we learned that a twenty-foot rip had appeared in the great balloon just below the equator. Nothing daunted, Captains Stevens and Anderson directed the repair of the rip and proceeded with their preparations. Although these men had to jump to save their lives when they made their former stratosphere flight, in their singleness of purpose and devotion to the cause of science they have permitted no obstacles to interfere with their effort to make another great contribution to the knowledge of the little explored regions of the upper air.

And now aviation enthusiasts and scientific men all over the world are singing the praises of two intrepid aeronauts - Captains Stevens and Anderson - for ascending into the stratosphere to a height never before reached by man. The ceiling of the big balloon, as announced by Captain Stevens in the course of a radio conversation, was about 74,000 feet. This is almost half a mile in excess of an unofficial mark set by two Russian aeronauts in January, 1934, who lost their lives in a crash landing. The actual altitude the two Air Corps officers attained will not be known until the sealed instruments car-

ried in the stratosphere balloon are calibrated by the U.S. Bureau of Standards.

Here it can be truthfully said that patience and careful ground preparations had their reward. Weeks were spent at the stratosphere camp at Rapid City, South Dakota, awaiting a favorable opportunity to make this venture into the upper air regions. Time after time disappointment came when promises of favorable weather did not materialize, and by just one of those strange turns of fate a day most propitious in world history - Armistice Day - gave these two courageous Army airmen the opportunity they were longing for, and they made the most of it.

While the feat of reaching the highest altitude thus far recorded is a most outstanding accomplishment, the value of the scientific investigations conducted on this flight, through the use of specially conceived instruments little known to the layman, may prove such as far to exceed the expectations of even the most sanguine scientist.

The flight was a complete success, the landing perfect and all the instruments intact and containing information which will no doubt keep scientists busy for quite a while studying and evaluating it. This data may reveal hitherto unknown facts of, perhaps, a most startling nature.

One thing is certain, and that is that the world's store of knowledge will be enriched through this venturesome and extremely courageous expedition, sponsored jointly by the National Geographic Society and the Army Air Corps. Just as the Army airmen bided their time until they could give the command "hands off," so must we wait expectantly until the full import of this exploration into the stratosphere is made known.

Congratulations, Captain Stevens and Captain Anderson! Congratulations also to Captain Randolph P. Williams, ground operations officer, and all the other members of the ground crew.

---oOo---

NEW DE-ICING DEVICE

A B-12A Martin Bomber at Wright Field, Dayton, Ohio, has been equipped with a new set of Goodrich De-icers of the mechanically attached type. After the airplane is prepared to receive this type De-icer, installation and removal can be accomplished in approximately half the time required for the cemented-on type. The propeller blades, out to the 30-inch station, and the spinners are covered with sheet rubber and treated with an oil solution. The rubber surfaces on the propellers will be periodically coated with castor oil to maintain the de-icing properties. This set of equipment will be tested during the winter months.

MILITARY AVIATION AND CHEMICAL WARFARE By Lieut. Ellsworth C. French, Wash. N. G.

Military aviation may find chemical warfare to be its most serious problem in case of another national emergency officers of the 41st Division Aviation, Washington National Guard, were told by Colonel Alex Sabiston, who participated in the Fourth Army Command Post Exercise at Fort Lewis, Wash.

Colonel Sabiston, of Spokane, Infantry Assistant Chief of Staff to General White of Oregon, Commander of the 41st Division, delivered a well prepared and illustrated two-hour lecture on the Air Corps participation in the problem "as I saw it indirectly while performing my regular duties."

"It was my good fortune to be quartered with the Air Corps officers assigned to the problem," Colonel Sabiston continued, "and they were the finest group of officers with whom I have come in contact. From them I gathered much of my information for this lecture."

Toward the end of the problem Colonel Sabiston said that the "maroon" chemical warfare officer became very active through the use of gas bombs on the "blue" airdromes.

"I think the Air Corps officers were impressed with the fact that such activities might very easily put their operations out of commission for 24 hours," he said, "because they perfected a real airdrome organization."

Colonel Sabiston was interested in the fact that soon after the problem started many of the original airdrome locations were abandoned and new ones established within the range of operation of the various types of aircraft. In several instances the airdromes were moved further back into the theatre of operations.

"The pilots and observers from Crissy Field, Calif.," he said, "actually went out and photographed much of the terrain over which the problem took place, and these photographs were very valuable."

Bombardment and Observation aviation predominated throughout the problem, with Observation doing a great deal of work and providing much valuable information. The ground arms of the service apparently did not appreciate the fact that "time was necessary for the Air Corps to prepare for the various missions wanted."

An order was issued that all missions desired for the next day had to be made known at 4:00 p.m. the day before. In preparing the problem, landing fields were established from maps which apparently indicated satisfactory terrain for a landing field, while actual photographs of the area proved the proposed sites to be entirely satisfactory.

Very little voice was used in communications, code being used almost entirely. A very satisfactory system was worked out whereby code signals and frequencies were changed every five days for both ground

and air stations, and for certain units of the various organizations.

Early in the problem an enemy aircraft observation station system was established, and before the problem ended this system became almost entirely an Air Corps activity.

The Air Corps officers worked out a very splendid system whereby they could intercept enemy aircraft. It was a system of strings, each marked into 10-minute flight periods and each attached to the friendly aviation stations. By maneuvering these strings on the course of the enemy flight, as reported by the observation stations, the officers could tell in an instant where the enemy aircraft could be intercepted."

Colonel Sabiston stated that during the early days of the problem the "Blue" air force gained and maintained air supremacy because of the inferior type of aircraft supposedly used by the "Maroons." This situation changed, however, and soon the battle for "supremacy of the air" became a real engagement.

Most puzzling to officers of the 41st Division Aviation is how the "Maroon" forces landed their thousands of troops without being detected, and from whence came the "Maroon" Bombers in advance of the troops.

The field order for the problem was displayed, as were many of the maps and other orders necessary to the "Blue" Air Force operation. During the two weeks of the problem a pile of type-written orders more than ten inches high were written.

The first order to the "Blue" Air Force was to gain air supremacy and destroy docks, transports, supplies, carriers and enemy shore bases. Pursuit was ordered to stop all enemy observation from the air.

All Department of Commerce radio communications were taken over by the Air Corps and operated in cooperation with Department of Commerce officials.

Colonel Sabiston regarded the paper given by Colonel Roy C. Kirtland, Air Corps, as the "Finest of all comment after the problem was over."

---oOo---

FIELD EXERCISES BY THIRD WING

The 20th Pursuit Group with its three tactical squadrons, the 55th, 77th and 79th, carried out field exercises at Tallulah, La., on October 3rd and 4th. The 71st Service Squadron, with 45 trucks, preceded the air echelon and set up temporary Headquarters.

Forty-one airplanes of the 20th Pursuit Group, plus the 90th Attack Squadron, participated in maneuvers before the Command and General Staff School at Fort Leavenworth, Kansas, from October 9th to 14th.

On October 16th and 17th, the Third Attack Group, with the 8th, 13th and 90th Attack Squadrons, performed a field maneuver at Tyler, Texas. The ground echelon with 31 pieces of motor transportation was furnished by the 60th Service Squadron which set up temporary field headquarters.

The Third Wing, GHQ Air Force, with 70 airplanes of both the 20th Pursuit Group and the Third Attack Group, occupied Shushan Airport at New Orleans, La., from October 20th to 24th. Fifty trucks were furnished by the 60th and 71st Service Squadrons as transportation for the ground echelon and for general logistical purposes, and a total of approximately 200 enlisted men participated. Gunnery practice was held over Lake Pontchartrain, and both Groups patrolled the area between New Orleans, La., and Pensacola, Fla., for the purpose of observing and repelling a mythical hostile fleet invasion from the direction of Cuba.

Shushan Airport proved itself an ideal air base, and the officials of the Airport and leading citizens of New Orleans cooperated in every way possible to make this the most satisfactory as well as the most enjoyable maneuver yet held by this Wing.

---oOo---

FIRST AIRSHIP TO VISIT BARKSDALE FIELD

Some 1,000 citizens of Shreveport, La. and vicinity, witnessed on October 25th the arrival, servicing and departure of the first airship to visit Barksdale Field. The TC-13, after making a non-stop flight from Langley Field, enroute to its new base at Sunnyvale, Calif., landed at Barksdale Field at about 11:00 a.m. The airship was held on the ground by enlisted men of the 3rd Wing and of the Barksdale Field Station Complement while it was serviced with 700 gallons of gasoline and the pilot secured the latest available weather data. The airship was preceded by two Bombardment airplanes carrying the advance agent and a portable (sectionalized) mooring mast.

---oOo---

JAPANESE OFFICIALS VISIT BARKSDALE FIELD

Major-General S. Ito, the directing general of engineering in Japan, accompanied by six Japanese officers and one Japanese engineer, paid a visit to Barksdale Field on November 5th. The Program in his honor included an aerial review of the Third Wing and a luncheon at the Officers' Club.

General Ito was impressed with the size of the flying field, as well as the post proper, and made the statement: "In Japan we do not have such room. I think Barksdale Field is ideal for training."

KAUAI'S "MYSTERY FOREST" PROVES MONUMENT TO FIRST U.S.-HAWAII FLIGHT PILOTS

Riddle of Strange Forest Discovered by C.C.C. Workers Solved. Was Sown from "Bird of Paradise," first Plane to Complete U.S. - Hawaii Flight

Amazed and incredulous were C.C.C. workers recently when, in the eroded and deforested areas of Kauai, northwest of Waimea Canyon, they suddenly ran upon an unknown forest of many hundreds of sturdy young trees waving their fresh green foliage like so many flags under the brilliant sun. "How on earth did these get here?" they asked, using their own more vigorous expletives.

A careful examination of the trees only served to increase the mystery, for all were of the same size, age, and kind - New Zealand Karaka - and yet there was nowhere in the locality an older tree of the species that could have claimed to be the "proud papa" of even one or two of the strange new trees, let alone the entire forest.

Here was a mystery, indeed, and only a fevered search through the letter files of the Governor of the Territory and the Commanding General of the Hawaiian Department, plus considerable peering through the windows of an uninhabited old building, eventually solved it.

The old building into which the vital peering was done stands drearily in a solitary corner of old Wheeler Field on the Schofield Military Reservation. Though it is more than amply defended by millions of defiant burrs, hardened cross-country hikers can approach, peer through the chinks in the windows, and discover in the gloomy interior - the "Bird of Paradise" - first plane successfully to negotiate the Pacific from the States to Honolulu.

It was from this plane, once courageously piloted for 2400 miles across the Pacific from Oakland, Calif., to Honolulu by Lieuts. Albert Hegenberger and Lester Maitland, and now destined for a place of permanent glory in a future military museum, that Kauai's mysterious Karaka forest was sown almost six years ago. It all came about in this way:

Along in November, 1929, reports that all was not well on the Island of Kauai came to Bruce Cartwright, then Acting President of the Board of Agriculture and Forestry. Badly eroded, the region northwest of the Waimea Canyon was sadly in need of a forest covering to keep the soil from continuing to wash into the sea. But the cut-up and inaccessible condition of the land made ordinary methods of tree planting highly impractical. The Board of Forestry was pondering the matter when it suddenly received an inspiration. It passed the inspiration on to Lawrence M. Judd, then Governor of the Territory who, in turn,

passed it on to Major-General Fox Conner, then commanding the Hawaiian Department.

"Would the Army provide an airplane from which tree-seeds could be scattered over this section of Kauai so badly in need of trees and which it was impossible to reforest in any other way?"

Never failing to forward a good purpose, the Army provided a plane - the "Bird of Paradise," which, after its historic Pacific flight (June 28-29, 1927), had been turned to Regular Army service in the Hawaiian Department. Not only had its mission become less romantic, but its name as well, for in place of the poetic designation "Bird of Paradise," it bore the prosaic title "U.S. Army Fokker C-2."

The "tree-planting" flight was made from old Wheeler Field on November 15, 1929. Seed, selected by the Forestry Board, was picked up at the Hanapepe Airport, and in the course of three flights over the area to be reforested, 1689 pounds of seed were dropped. During these trips, the plane carried the following occupants: 1st Lieut. R. E. Culbertson, pilot; 1st Lieut. J. L. Leutenheiser, co-pilot; Corporal H. W. Pike, radio operator; Privates L. T. Chevalier and H. B. Rabalais, mechanics; and Assistant Forester A. W. Duval, who supervised the actual dropping of the seed as the plane flew over the extensive area. The section covered by the plane included the Puu-Ka-Pele Reserve, Na-Pali-Kona Reserve, and part of the Lihue-Koloa Reserve.

This, then, is the solution of the mystery of the sturdy little army of Karaka trees now growing near the Alakai Swamp on Kauai. In a letter recently received by Major-General Hugh A. Drum, present Commander of the Hawaiian Department, C. S. Judd, Territorial Forester, commenting on the aerial tree-planting venture of the "Bird of Paradise," wrote: "We are still very grateful to the U.S. Army for the helpful assistance in furnishing the Fokker plane, now out of commission, for the work of seed sowing from the air which has given the good results recorded in this letter."

"Out of commission" the "Bird of Paradise" now indeed is. Its flying days are over. It is to be placed in a museum to preserve for posterity the memory of Maitland and Hegenberger, who hold the same preeminent place in the history of Pacific Air Navigation that Lindbergh holds in that of the Atlantic. France has a monument to Lindbergh's heroic achievement. In Hawaii, until a more fitting one can be obtained, this flourishing army of Karaka trees sown by the "Bird of Paradise" will serve for

all who come upon it, by land or air, as an undedicated monument to the two heroic pioneers of America's brilliant future of air achievement in the Pacific - Maitland and Hegenberger.

---oOo---

RESERVE ACTIVITIES AT RICHARDS FIELD

In his first contribution to the News Letter, the Correspondent from Richards Field, Kansas City, Mo., summarizes the activities of Reserve units thereat during the past several months.

The 430th Pursuit Squadron had their summer training at Camp Ripley, Minn., during the period August 18 to 31. Twenty-one Air Corps Reserves attended, and a total of 262;45 hours was flown. Actual training with ground troops was performed throughout the two-week period, in addition to photographic, aerial gunnery and instrument training under the hood. The 3rd Infantry, Fort Snelling, Minn., and the 80th Field Artillery, Fort Des Moines, who were on field maneuvers, and the Iowa National Guard, Camp Dodge, Iowa, who were in annual encampment, were the ground troops and furnished the tactical problems.

The 314 Observation Squadron was trained at Fort Des Moines, Iowa, and used the Municipal Airport at Des Moines as the airdrome. Eleven Reserve officers attended the camp, and training with ground troops from Fort Des Moines was conducted during the period September 29th to October 12th. The flying time during this period totalled 210:05 hours. Training included all the phases which featured that of the first camp, except aerial gunnery. The Commanding Officer of this activity desires to thank publicly the commanding officers of the various ground organizations whose interest and work on the various problems made these camps by far the most interesting ever attended by the Air Corps Reserves.

During the month of October, a total of 109 Army aircraft, carrying 76 passengers, visited Richards Field. Among these visitors were Congressman McSwain; Brig.-General Frank M. Andrews, Langley Field; Major DeFord, Maxwell Field; Captains McClellan and McDonald, of Bolling Field, also Major Beam; Majors Whitehead and Giles, Langley Field; Captains Laughinghouse, Marshall Field, and Hackett, Wright Field. The Eastern and Northern contingents of National Guard organizations, who sent representatives to the National Guard Convention, also kept the field personnel busy for a few days.

In conclusion, the News Letter Correspondent adds: "If anyone has a spare hangar laying around it could be used to a good advantage."

FIRST FORCED LANDING IN SEVEN MONTHS

The News Letter Correspondent from Luke Field, T.E., calls attention to the fact that the 72nd Bombardment Squadron at that station had its first forced landing over a period of seven months on October 11th, when Lieut. Bowyer set his Keystone Bomber down "dead stick" without a scratch after he discovered that his instrument panel began smoking. A starter switch plate was found to be loose. A new switch was installed, the wiring replaced, and the plane was ready to fly again within a very few hours.

The previous forced landing occurred seven months ago (March, 1935) at Luke Field, due to a new engine overheating.

"The personnel of the 72nd Squadron," concludes the Correspondent, "deserve special mention for their excellent work and results with such old equipment."

---oOo---

CHANGES IN AIR CORPS NON-COM. PERSONNEL

Five noncommissioned officers of the Air Corps were recently placed on the retired list, viz:

Master Sergeant Charles Gail, Rockwell Field, Calif., and Technical Sergeant Tony J. Odens, Barksdale Field, La., on September 30, 1935.

Master Sergeants Stephen McAlko, March Field; Henry Wechsler, Mitchel Field, and Arthur J. Shanley, Randolph Field, on October 31, 1935.

Noncommissioned officers promoted to the grade of Master Sergeant were 1st Sergeant David H. Van Houton and Technical Sergeant Herbert Michler, Randolph Field; Technical Sergeants Benjamin J. King, Langley Field, and Don W. Whiteside, March Field.

Four Staff Sergeants were promoted to the grade of Technical Sergeant - Leonard Miramontes, Barksdale Field; William Fitzpatrick, Hawaiian Department; Richard Denington, March Field, and Henry Kirby, Brooks Field.

---cOo---

CONGRESSMEN VISIT ADVANCED FLYING SCHOOL

A Congressional party, consisting of members of the House Military Affairs Committee - Messrs. John J. McSwain, of South Carolina, Chairman; J. Joseph Smith, of Connecticut, and John M. Costello, of California, recently visited Kelly Field, Texas. They were flown to San Antonio in a Curtiss "Condor" air liner, piloted by Major Hez McClellan and Captain George C. McDonald, Air Corps. Upon their arrival at Kelly Field they were greeted by Brigadier-General James E. Chaney, Commanding General of the Air Corps Training Center, and Colonel Jacob E. Pickel, Commandant of the Air Corps Advanced Flying School, who accompanied the party on a tour of inspection of

Kelly Field.

The visit of these Congressmen has again revived hope among the personnel of Kelly Field that this post will soon be rebuilt.

---o06---

WELL KNOWN FORESTRY OFFICIAL PASSES AWAY

By the News Letter Correspondent

He wasn't in the Air Corps, and he wasn't a licensed commercial pilot. However, no friend of aviation will be missed more around Felts Field, Spokane, Wash., than Howard Flint, Assistant Regional Forester, No. 1, embracing western Montana, northern Idaho and a small part of eastern Washington.

It was with a feeling of real sorrow that airmen of the Washington National Guard in four planes went recently on the mission of flying over the funeral party of Mr. Flint in Missoula, Montana.

Mr. Flint, well known to many Army flyers, flew forest patrol operations for the past ten years, and probably had to his credit more photographic hours than any other person in the United States. Each summer for the past ten years he spent four months at 14,000 feet photographing national forests for the Forest Service. He had made sufficient prints to reach more than once around the world at the equator.

Mr. Flint, who organized the National Geographic Society's expedition down the Salmon River, was taken ill on the trip. It was necessary for Pilot Bob Johnson, of Missoula, to fly the sick man off from a very narrow sand bar in the Salmon River. Before Mr. Flint reached Missoula, he became unconscious in the airplane and died a short time afterward in a Missoula hospital.

In the airplane formation from Felts Field were Captain L.C. Sherman, Lieuts. Emmett Corrigan, Dale Swarta and Claire Hartnett, who flew formation over the funeral party.

---o0o---

REFUELING PLANES WITH SMALL CONTAINERS

By the Wheeler Field Correspondent

It is an established principle that, during field operations, aviation gasoline will be supplied in 50-gallon drums and 5-gallon tins. Tank cars on sidings at rail-heads are most vulnerable, as are the field servicing trucks. The failure of the servicing truck would ground an entire unit. The tracks made by a servicing truck would disclose the positions of airplanes to aerial observers, whereas drums and tins can be rolled or carried to the gas park positions, using different routes each time. The use of the drums and cans conserves rolling stock, as any car only partly filled with gasoline

can be loaded to its capacity with other supplies.

As a basis for future study and in order to train its own personnel as well as test different methods, each of the component tactical squadrons of the 18th Pursuit Group were required to service from 5-gallon tins for a sufficient period to become thoroughly familiar with the problems involved and the methods of meeting them.

One squadron conducted its tests in the field during the Hawaiian Joint Maneuvers when actual war conditions were simulated, and the other two later conducted their tests at Wheeler Field.

A 2½-ton Federal truck was used for transporting the 5-gallon tins of gasoline. The floor of the truck was covered with felt to eliminate static electricity and prevent sparks. By laying a platform of loose boards on top of the side seats of truck, two layers of tins could be carried therein, which made a load of 140 cans, or about 700 gallons, sufficient to refuel a Pursuit or Attack Squadron after an average mission.

In filling the tins, the gasoline was first taken from the station aqua system, then passed through a field servicing truck in order to gain the advantage of two segregations which would eliminate the slow process of filtering the gasoline at the airplane to be serviced. During all filling operations, the tins were bonded to a ground.

The 19th Pursuit Squadron conducted its refueling test in the field under simulated war conditions, the airplanes being dispersed around the airdrome. A gas park was established about 50 feet from each airplane, and the cans were covered with canvas to protect them from the weather and aerial observation. Each gas park was equipped with two spouts especially designed for this fueling operation, with a vent tube, a hose and a bonding wire. The first issue of gasoline was delivered during daylight to acquaint the supply personnel with the dispersed positions of the airplanes. Later deliveries were all made at night. It was found that with two man crews the entire squadron could be serviced with an average of 40 gallons of gasoline and two quarts of oil in 12 minutes.

The 6th Pursuit and the 26th Attack Squadrons conducted their tests at Wheeler Field. With the same equipment that was used by the 19th Pursuit, the week's test by the 6th Pursuit showed that, using three man crews, the entire squadron could be refueled simultaneously in 10 minutes at the rate of 50 gallons per airplane.

The 26th Attack Squadron found it necessary to use different equipment because of the type of plane used, and employed an 8-foot length of fabric, rubber lined standard one-inch fuel hose, with metal tubing spout on one end and an air

vent filler cap on the other. Using two man crews, it was found that all planes could be serviced simultaneously at the rate of 4.6 gallons per minute per airplane, and with 4-man crews at the rate of 5.25 gallons per minute. The refueling of oil was comparatively slow, averaging 4 quarts per minute.

As for the actual mechanics of the refueling operations, several methods were tried, and the most successful for each type of plane is here described. With the P-12 plane, the 3-man crew was found to be the best. One man moved cans from park to right front of airplane and removed adapter spout from empty cans. One man screwed the adapter into full can and handed it to the man on the airplane, at the same time snapping the bonding wire onto the new can and the other end of this wire to the outlet of the carburetor heater. The man on the airplane can stand on the lower wing and wheel or straddle the nose of the airplane just in rear of the cowlings. In either position he can balance the gasoline can on the upper wing and eliminate the necessity of holding aloft the 52-pound can while it drains.

For the A-3 airplane, the best method was to place the nose metal spout in the airplane fuel tank and allowing it to remain there during the entire refueling operation. The hose was run through the upper wing hand grip and a funnel with a one-inch opening and a 12-inch bell was then inserted in the end of the hose. The upper wing hand grip held the funnel in the correct upright position. The crew chief would stand in the front cockpit and empty the tin into the funnel. The assistant crew chief would stand on the ground and hand up the full tins and receive the empties, and by using two air vent filler cap spouts he would have a full tin always ready to be poured into the funnel. During all fueling operations the tins were grounded to the airplane by snap bonding wires. A Foamite extinguisher was kept in close proximity to every airplane being fueled.

The system of refueling from tins has many advantages, the saving of time being the most important. The process would be even more satisfactory during actual war conditions when the airplanes are parked in a camouflaged trench hangar. Refueling could be speeded up by furnishing oil in gallon cans instead of 5-gallon cans, as the spout on a gallon can could be inserted in the oil tank and the can would be light enough to be held in the draining position. With the 5-gallon can, the oil must either be transferred to another container, such as a gallon measure, or one man must hold the can aloft until the tank is full.

The preparation and preservation of the tins presented a problem. It was decided that the most satisfactory solu-

tion would be to paint the exteriors of the cans in camouflage colors and, when the cans were to be stored, to coat the interiors with a solution of gasoline and oil. The painting of the exteriors in camouflage colors not only protects the surface of the tins but reduces their visibility from the air, which greatly simplifies field concealment.

A great deal can still be done to improve the technique of this method of servicing. Experience based on the use of different types of airplanes and in different weather conditions is needed. A long step forward would be made if each unit in the Air Corps were to conduct a test of servicing from tins. The reports of the different units would give a fairly comprehensive picture of all the problems it is possible to meet, and would prepare the Air Force to operate under actual war conditions.

---oOo---

BRITISH FLYERS VISIT KELLY FIELD

Squadron Leader Oddie and Flight Lieutenant Barnett, of the British Royal Air Force, visited the Air Corps Advanced Flying School, Kelly Field, Texas, on October 26th. After escorting these officers to the Attack, Bombardment, Observation and Pursuit Sections, the camera obscura bombing range and the miniature range building, they were entertained at luncheon at the Cadet Mess. In addition to the Kelly Field personnel attending this luncheon, General Eckfeld and Captain Beck, of the Massachusetts National Guard, were also present.

Following the luncheon, the British officers, with the Assistant Commandant of the Advanced Flying School, the Director of Flight Training, and Chiefs of the Training Sections, held a round-table discussion of various matters pertaining to the training of students in this country and in England.

Upon their departure from this field they expressed their appreciation of the courtesies extended to them during their visit.

---oOo---

AERIAL GUNNERY TRAINING AT CHAPMAN FIELD

It is contemplated that certain combat units of the GHQ Air Force will be sent to Chapman Field, Miami, Fla., for aerial gunnery training during the period November 15, 1935, to March 15, 1936. Officers and enlisted men from the Second and Third Wings will participate in this training.

---oOo---

AIR RACES AT MIAMI, FLA.

The 8th Annual All American Air Maneuvers will be held at the Municipal Airport at Miami, Fla., for a period of three days, December 12-14, 1935.

MILITARY AFFAIRS COMMITTEE VISITS MARCH FIELD

March Field again drew applause from a Congressional Committee when the important Military Affairs Committee of the House of Representatives visited that station on October 26th and 27th. The Committee is completing a tour of military posts in the West.

Especially enthused was Chairman John J. McSwain, of South Carolina. "This is my first visit to March Field," he declared. "I find it to be in wonderful condition. Most wonderful of all is the pride that the officers and men apparently take in their training."

Though none of the members of the Committee would commit themselves as to future appropriations for March Field, Mr. McSwain was impressed by the congested conditions existing in the enlisted men's barracks and by the need for more buildings to house them. The crowded conditions are the direct result of the recent transfer of 350 enlisted men from Rockwell Field to March Field.

Honoring the members of the Committee, an air review of March Field's planes was held shortly after the party arrived from the Griffith Park airport in Los Angeles on October 26th. The day before the Committee had inspected Air Corps installations at the Long Beach airport and coast defenses of Fort MacArthur.

Units participating in the sky parade were the 17th Attack Group, in command of Lieut.-Colonel John H. Pirie, and the 19th Bombardment Group, commanded by Lieut.-Colonel Howard C. Davidson. The 19th Bombardment Group landed immediately after the review, thus giving the 17th sky room to perform the aerial gymnastics for which it is so well known. Among the sky antics were the figure eight and the Group Infantry Circle which have delighted Exposition visitors at San Diego since the Fair started last Spring.

In an address at Wing Headquarters which followed the Wing Review, Brigadier-General Henry H. Arnold made a strong appeal for more Pacific Coast air bases. He especially mentioned the need for one in the Pacific Northwest. The General pointed out that such a base would not only be strategic but would give outlet to March Field, now said to be quartered by 50 percent more men than can be taken care of with full training efficiency.

The need for an air base in Alaska was touched on by General Arnold. It was pointed out that establishment of an Alaskan base would establish the United States in control of the North Pacific from Alaska to Seattle to Hawaii, that is, with the provision that long range bombers be provided.

Forty million dollars would be suffi-

cient to equip the whole GHQ Air Force adequately, according to General Arnold.

Most spectacular of all the day's activities was the intricate searchlight practice and demonstration staged by Battery "A" of the 63rd Coast Artillery (anti-aircraft) from Fort MacArthur, Los Angeles, and six planes from the 19th Bombardment Group from March Field. The battery was in command of Captain Arthur B. Nicholson, C.A.C., while the 19th Bombardment Group planes were commanded by Lieut.-Colonel Howard C. Davidson.

The planes approached March Field in groups of two, one flying 100 feet above the other. They flew at a speed exceeding 200 miles an hour, making it difficult for the searchlight men to locate them. One minute later they were followed by two other planes, and one minute after by two more. The Congressmen appeared to be favorably impressed with the demonstration of skill on the part of the Coast Artillery and the Air Corps.

The Congressmen in the party were Messrs. John J. McSwain, Joseph Smith of Connecticut, John M. Costello of Hollywood, John Dockweiler of Los Angeles and Sam L. Collins, of Fullerton, Calif. The Committee was accompanied by Mr. Robert M. Frazier, Secretary.

After the speech by General Arnold, the Committee was entertained at luncheon at the Officers' Club. Among the guests was the Mayor of Riverside, Calif., Mr. E.B. Criddle.

Staying overnight at various officers' homes on the post, the Committee left for the Rockwell Air Depot on October 27th to inspect various projects there.

---oOo---

AN AIR-MINDED STATE EXECUTIVE

After a few months' vacation from the air, Governor Clarence D. Martin, Commander-in-Chief of Washington National Guard troops, has again taken to the air, using ships of the 41st Division Aviation, Felt's Field, Spokane.

Recently, Governor Martin found himself confronted with a heavy schedule of engagements in various parts of the State. He requested an airplane, which was piloted on a three-day trip by Lieut. E. Malmstrom.

The Chief Executive of the State of Washington was taken off from a Department of Commerce Field in his home town, Cheney, and flown to Walla Walla to attend a meeting of the Pardon Board. He next visited the Grand Coulee power project on the upper Columbia River, where a C.W.A. Airport exists, and returned to Spokane. The remainder of his flight was from Spokane to Yakima.

Governor Martin has full confidence in all pilots of the 41st Division Aviation.

---oOo---

B I O G R A P H I E S

LIEUT.-COLONEL WALTER R. WEAVER

During the World War, a few months following his appointment as a Major in the Aviation Section, Signal Corps, Lieut.-Colonel Walter R. Weaver, Air Corps, was given the very important and most difficult assignment of organizing the Aviation Mechanics School at St. Paul, Minn. At this school instruction was given in fifteen branches of aviation mechanics to some 5,000 students. Col. Weaver began his duties as commanding officer of this school on February 14, 1918, and towards the close of the War orders had been issued directing that expansion and organization be completed so as to increase the enrollment to 10,000 students, so successful had been the operation of the school.

Born at Citadel, Charleston, S.C., February 23, 1885, Col. Weaver was educated at the Virginia Military Institute and the United States Military Academy. Upon his graduation from West Point, February 14, 1908, he was commissioned a second lieutenant and assigned to the 11th Infantry, serving with this regiment to July 1, 1910. He then served successively with the 23th, 24th, 5th, 22nd and 7th Infantry regiments. He was promoted to 1st Lieutenant of Infantry, December 4, 1915; to Captain of Infantry, May 15, 1917, and to Major, Aviation Section, Signal Corps, November 5, 1917. His first station in his new branch of the military service was at Wilbur Wright Field, Dayton, Ohio, where he reported November 22, 1917, and where he served successively as Executive Officer, Intelligence Officer and Commanding Officer.

On January 15, 1919, Col. Weaver took up his duties in the Supply Group, Office of the Director of Air Service, Washington, D.C., as Chief of the Mechanics Training Division. Later he was Chief of the Engine and Plane Maintenance Section, Supply Group, which he built up to a high state of efficiency.

In October, 1920, he began flying training at March Field, Riverside, Calif., upon the completion of which he was ordered to Kelly Field, Texas, for advanced training, qualifying as a Bombardment pilot and receiving his flying rating on April 27, 1921.

His flying training completed, Col. Weaver returned to the Supply Group, where he was assigned as Chief of the Property Requirements Division. In the period from December, 1921, to October, 1923, he commanded Mitchel Field, N.Y. and, despite many handicaps, among them shortage of commissioned personnel and lack of sufficient funds to effect needed improvements, brought the operation of this station to a state of efficiency such as to bring him commendation

from inspecting officers.

From Mitchel Field, Col. Weaver proceeded to the Boston Airport, where he was in command for several months. From February to June, 1925, he was a student at the Harvard University School of Business Administration, following which he assumed command of the Air Depot at Middletown, Pa., and served as such until May, 1927. After completing a special course of instruction in Air Corps Observation at the Advanced Flying School at Kelly Field, Texas, he took over the command of Maxwell Field, Montgomery, Ala. From January to May, 1931, he also served as Air Officer of the Fourth Corps Area.

Transferred to duty in the Office of the Chief of the Air Corps, Washington, Col. Weaver was assigned as Chief of the Plans Division January 13, 1932. From August, 1932, to June, 1933, he attended the Army Industrial College, Washington, and upon his graduation therefrom he was assigned to duty as Chief of the Information Division, Office of the Chief of the Air Corps.

In September, 1934, he was assigned to duty in New York City as Air Corps Procurement Planning Representative, and in April, 1935, he was transferred to duty with the Headquarters, GHQ Air Force, Langley Field, Va., as Chief Inspector.

During the time he was stationed at Maxwell Field, Col. Weaver, during the time of the great Mississippi River flood, in March, 1929, personally supervised flood relief activities for Southern Alabama, where the towns of Elba, Geneva, Brewton, Pollard, Keego, River Falls, Gantt, Flomation, Sparta and Castleberry had been inundated. Food and medical supplies to the extent of 27½ tons were delivered by airplanes of the 22nd Observation Squadron, Air Corps; the 106th Observation Squadron of the Alabama National Guard, and a flight of airplanes from Langley Field, Va., without a casualty.

At Maxwell Field, Col. Weaver planned and installed the finest cafeteria style mess for enlisted men in the U.S. Army, and it proved an instantaneous success. Several other Air Corps stations have adopted this mess system for enlisted men.

His principal interest in flying is in the field of Sea Frontier Defense. In Observation Aviation, his specific interest is in radio-controlled flights, he having personally directed the maneuvers of the different elements. He directed and planned a system of plane to ground contact work between the 22nd Observation Squadron planes and American Legion Posts in every section of the State of Alabama, this to be used in case of emergency, the pick-up and drop message panel system being employed.

Away from the cares and worries of offi-

cial duties, Col. Weaver has a number of hobbies to take up his spare time, his principal one being radio, in which he has performed a considerable amount of experimental work. He is the

inventor of a game called Chessair, combining the elements of flying with the conventional game of chess. With golf, his dogs and his motor boat, "he has nothing to do until tomorrow."

---oOo---

LIEUT.-COLONEL WALTER H. FRANK, AIR CORPS

Lieut.-Colonel Walter H. Frank, Air Corps, became affiliated with Army aviation just 13 years ago when, as a Captain of Infantry, he accepted appointment as Major in the Aviation Section, Signal Corps, on November 4, 1917, whereupon he was assigned to duty with the Training Brigade at Kelly Field, San Antonio, Texas.

Col. Frank was born at Humphrey, N.Y., April 23, 1886. His graduation from the U.S. Military Academy on June 10, 1910, and his appointment as a second lieutenant of Infantry was followed by his assignment to duty at Plattsburgh, N.Y., where he performed company, battalion and regimental duty until August, 1913. For the next two years he was stationed at Madison Barracks, N.Y., following which he served a tour of duty for three years at Schofield Barracks, Hawaii.

Upon his return to the United States, Col. Frank was stationed on the Mexican Border for several months, and he was then assigned as student at the School of Arms, Fort Sill, Okla., where he remained until his transfer to the Aviation Section, Signal Corps. He received his promotion to 1st Lieutenant, July 1, 1916; to Captain, May 15, 1917, and to Major, October 23, 1917.

Col. Frank's stay at Kelly Field was brief, for on November 22, 1917, he entered upon his duties as Executive Officer at Ellington Field, Houston, Texas. He served as commanding officer of this post from July 19th to November 5th, 1918, in the meantime taking the regular course of flying training. He passed the required flying tests and received the rating of Junior Military Aviator, effective August 29, 1918. His administration of the Bombing and Gunnery School at Ellington Field brought him high commendation from the Director of Air Service.

In December, 1918, Col. Frank was transferred to duty in Washington and assigned as Executive of the Training

Section, Office of the Director of Air Service. From June to August, 1919, he was placed in charge of an extensive Air Service Recruiting Campaign, the success of which attested to his high executive ability. For several months he served as a member of the Advisory Board, and in November, 1919, he was detailed as a student at the Air Service Engineering School at McCook Field, Dayton, Ohio. Following his graduation therefrom on September 15, 1920, he returned to Washington and was on duty in the Office of the Chief of Air Service as Acting Executive Officer from October 10, 1920, and as Executive Officer from November 29, 1921, to September 22, 1924.

Assigned to duty as student at the Air Service Tactical School at Langley Field, Va., Col. Frank graduated therefrom in June, 1925, and from the Command and General Staff School, Fort Leavenworth, Kansas, in June of the following year. He continued his connection with school work by being then assigned as Assistant Commandant of the Air Corps Tactical School, and he performed this duty, as well as that of instructor, until his detail as a student at the Army War College in August, 1930. His graduation from this institution in June, 1931, was followed by a period of duty for four years in the Plans Division, Office of the Chief of the Air Corps.

On August 17, 1934, he was assigned to the command of Mitchel Field, L.I., New York, and of the 9th Observation Group. He was promoted to Lieut.-Colonel, January 1, 1935.

An officer of high professional attainments, Col. Frank has served in an executive capacity in various Air Corps maneuvers, and the manner in which he performed his duties brought him high commendation from his superiors. On numerous occasions he delivered lectures dealing with the tactical functions of the Air Corps, which also brought forth expressions of high praise.

---oOo---

PONTIAC ENGINEERS CLUB VISITS SELFRIDGE FIELD

Members of the Pontiac Engineers Club, of Pontiac, Mich., 135 in number, visited Selfridge Field, Mt. Clemens, Mich., recently, and witnessed the routine flying training scheduled for the morning. The members of the Club were then conducted through the various

activities of the post, and had luncheon at the Officers' Club and the Post Exchange restaurant.

---oOo---

Once more the News Letter invites those handy with pen or pencil to submit cover design sketches.



HE command of all the air forces of the U.S.S.R. is exercised by the Chief Air Force Administration who functions under the People's Commissariat for Defense. An Inspectorate of Civil Aviation, independent of this administration, is also directly responsible to Voroshilov.

Under the Air Force Administration are the Chiefs of the Air districts who are in command of the air units located on the territory of each of the military districts (11 districts or regions), with the exception of the aviation schools which are subordinate to the Training Administration. These chiefs are the technical advisers of the military district commanders to whom they are attached.

From a tactical viewpoint the Air Force is organized into brigades of the autonomous Air Force, brigades of naval aviation and separate units.

Since 1931, the USSR has not furnished to the Secretariat of the League of Nations official information about the strength and composition of its Air Force. It is, nevertheless, possible to establish the existence of the following units, with the reservation of modifications which may have been made in this distribution but which will not perceptibly change the figures given below.

(1) The Autonomous Air Force comprises 18 air brigades consisting of about 48 squadrons ("escadrilles").

(2) The units cooperating with the Army consist of about 58 separate squadrons.

(3) Naval aviation comprises 4 brigades consisting of about 19 groups ("escadres") as well as 18 separate squadrons insuring cooperation with the Navy.

(4) The Air Force of the Caucasus and Volga, not organized into brigades, comprises about 5 groups and 7 separate squadrons.

(5) A separate air wing (literally "group") consisting of 5 groups.

The total of these units is about 77 groups and 83 separate squadrons; in accordance with the missions assigned to aviation they are divided as follows:

Pursuit units: About 26 groups and 24 separate squadrons (about 35%), approximating 1,000 airplanes.

Bombardment units: about 31 groups and 2 separate squadrons (about 34%), approximating 400 medium and 310 heavy bombers.

Observation units: about 22 groups and 56 separate squadrons (about 27-31%), approximating 1,000 airplanes.

Attack units: about 4 groups and 1 separate squadron, approximating 400 airplanes.

The materiel of these units consists of about 3,000 planes in active service. The increase attained during 1934, in

relation to that of 1933, is about 45%. If the indications given recently by Tukhachevski, according to which the number of planes has increased by 330% since 1930, and the official figures published by the League of Nations, i.e., 750 Soviet airplanes as of January 1, 1931, are considered, the number of 3,000 planes seems to be near the truth. According to the figures published by the Soviet press, the number of planes which participated on May 1, 1934, in the various cities of the USSR was about 3,050, including 800 planes in the Far East.

The Special Far Eastern Army has one air brigade (4 groups and 5 separate squadrons and one naval air brigade (9 groups and 2 separate squadrons), altogether about 780 planes; these units are included in the above figures.

The location of the other brigades is as follows: 4 in the Leningrad M.D. (20 groups and 7 separate squadrons); 3 in the Moscow M.D. (10 groups and 11 separate squadrons), 3 in the White Russian M.D. (7 groups and 12 separate squadrons); 3 in the Ukrainian D.M. (7 groups and 14 separate squadrons); 4 in the Siberian M.D.; 2 in Central Asia; 1 in the Kazak Military Commissariat; and 1 in the Red Banner Caucasian Army.

The number of these units will soon be increased as the Five-Year Plan provides for a total of 5,000 planes organized into 92 groups; of these 4,000 planes are supposed to be in active service. The second Five-Year Plan provides for the construction of 300 all-metal pursuit planes, 120 observation planes of a considerable range, 112 attack planes, 80 heavy bombers, and, for the Navy, 242 pursuit planes, 92 observation planes and 75 bombers. The construction of bombardment planes and large planes shows that the Soviet General Staff has adopted the doctrine of the Italian General Douhet.

) ---oOo---

A CORRECTION

On Page 7 of this issue of the News Letter, announcing changes among Air Corps noncommissioned personnel, the name of Technical Sgt. Herbert Michler is included among others promoted to the grade of Master Sergeant. In the issue of the News Letter of February 1, 1935, which contained a list of Technical and Staff Sergeants who, in the order of their standing, were eligible for promotion to the next higher grade, the name of Sergeant Michler was, through error, omitted from the list of eligibles for the grade of Master Sergeant and, instead, shown on the list of eligibles for promotion to the grade of Technical Sergeant. This noncommissioned officer has been a Technical Sergeant for some years, and his correct position should have been shown on the eligible list for Master Sergeant between the names of Sergeants Benj. J. King and Don W. Whiteside.

NEW CLASS REPORTS AT ADVANCED FLYING SCHOOL

A new class of students entered the Advanced Flying School, Kelly Field, Texas, for training on October 15th. This class consists of six officers of the Regular Army, 2 foreign officers, and 50 Flying Cadets, a total of 58 students.

Ground school for this class began on October 18th, and flying training on the 21st. These students were assigned to sections for training as indicated below:

Regular Officers

Capt. James B. Jordan, A.C. (O)
2d Lt. Jerome E. Blair, II, Cav. (P)
2d Lt. Robert N. Tyson, Inf. (P)
2d Lt. Paul Burlingame, Jr., Inf. (B)
2d Lt. Stanley J. Donovan, Inf. (B)
2d Lt. Edward Flanick, F.A. (B)

Foreign Officers

Lt. Jose G.V. Ahumada (P) Mexican Army
Capt. Jose C. Silva Muricy (O) Air Corps, Brazil

Flying Cadets

ATTACK SECTION

Robert S. Atkinson	Reno, Nevada
Glenn E. Brass	Okeah, Okla.
Nelson T. Brown	Tulare, Calif.
John H. Eakin	Cambridge, Mass.
Ryder W. Finn	Hamilton Field, Calif.
John S. Hardy	Logansport, La.
Edwin H. Hawes	Victoria, Texas
Elbert D. Reynolds	Beaumont, Texas
Roger M. Roberts	Menlo Park, Calif.
Kermit D. Stevens	Portland, Ore.
David Wade	Minden, La.
Earl Willoughby	El Centro, Calif.

OBSERVATION SECTION

Robert F. Burnham	Battle Creek, Mich.
Russell L. Flolo	Aberdeen, S. D.
Bela A. Harcos	Los Angeles, Calif.
William Rethorst	Piedmont, Calif.
Robert W. Ryder	Minneapolis, Minn.
Russell T. Sutherland	Champaign, Ill.
Ernest F. Wackwitz	Rockville Center, L.I., N.Y.
Audrin R. Walker	University, Ala.
Beverly H. Warren	Plainview, Texas
John D. Whitt	Austin, Texas

PURSUIT SECTION

Bertrand B. Bruce	Los Angeles, Calif.
Wilbur D. Camp	Arlington, Texas
Arch G. Campbell	Fort Worth, Texas
Chester W. Cecil, Jr.	Abilene, Texas
Wolcott A. Fariss	Sacramento, Calif.
William L. Hayes, Jr.	Sacramento, Calif.
Robert L. Johnston	Bellevue, Penna.
Ralph M. Kellogg	Dover, Mass.
Charles E. Kramer	Fulton, Ky.
Cecil P. Lessig	Salina, Kans.
Charles E. Marion	Detroit, Mich.
Robert C. Wood	Haynesville, La.
Harry B. Young	Maxwell Field, Ala.

BOMBARDMENT SECTION

Kenneth G. Ames	Bridgton, Me.
Dalene E. Bailey	Spokane, Wash.
Kenneth A. Cavenah	Helper, Utah
William E. Creer	Spanish Forks, Utah
Harry L. Donicht	Glencoe, Minn.

Kenneth H. Gibson	March Field, Calif.
Howard W. Helfert	Sioux Falls, S. D.
Lowell F. Johnson	Lafayette, Ind.
Charles E. Lancaster, Jr.	Lexington, Ky.
Clarence K. Longacre	Williamsport, Pa.
Robert L. Olinger	Angola, Ind.
Chris H. W. Reuter	Waco, Texas
Robert C. Sexton	Los Cruces, New Mexico
Willard E. Sherman	Mt. Vernon, S.D.
David H. Walker	Sacramento, Calif.

---oOo---

TEMPORARY PROMOTIONS

To Major

Captain George A. McHenry, Jr., assigned as commanding officer, 81st Service Squadron, Kelly Field, Texas, November 3, 1935.

Captain Signa A. Gilkey assigned as commanding officer, 4th Observation Squadron, Luke Field, T.H., November 7, 1935.

Captain James W. Spry assigned as commanding officer, 69th Service Squadron, Hamilton Field, Calif., November 11, 1935.

To Captain

1st Lieut. Shelton E. Prudhomme assigned as engineer officer, 66th Service Squadron, Nichols Field, P.I., November 16, 1935.

1st Lieut. Delmar T. Spivey assigned as engineer officer, 81st Service Squadron, Kelly Field, November 3, 1935.

To 1st Lieutenant

2nd Lieut. Millard L. Haskin assigned as communications officer, 99th Bombardment Squadron, Mitchel Field, N.Y., November 10, 1935.

---oOo---

The duty assignments of the following-named Air Corps officers, holding temporary increased rank, were changed. No changes of station are involved, and officers retain temporary rank:

Captain Frederick L. Anderson, Jr., from duty with Station Complement to Flight Commander, 9th Bombardment Squadron, Hamilton Field.

Captain Walter R. Agee from 11th Bombardment Squadron to Flight Commander, 88th Observation Squadron, Hamilton Field, November 18, 1935.

Captain Richard I. Dugan from 88th Observation Squadron to Flight Commander, 11th Bombardment Squadron, Hamilton Field, Calif., Nov. 18, 1935.

Captain Richard C. Lindsay from 9th Bombardment Squadron to Flight Commander, 88th Observation Squadron, Hamilton Field, Calif., Nov. 18, 1935.

Captain George W. Mundy from Engineer Officer, 66th Service Squadron, to Supply Officer of this squadron, Nichols Field, P.I., Nov. 16, 1935.

---oOo---

Air Corps officers who recently received permanent promotion to the rank of Major, as of November 1, 1935, were Captains George P. Johnson and Clyde V. Finter.

---oOo---

Major Hez McClellan, Air Corps, is relieved from assignment, duty and temporary rank with the 14th Bombardment Squadron, Bolling Field, Nov. 18, 1935, and assigned to Wright Field, O.

V-6898, A.C.

THE MITCHELL TROPHY RACE
By the News Letter Correspondent

The eleventh contest for the John L. Mitchell Trophy was held at Selfridge Field, Mt. Clemens, Mich., on Saturday, October 19th. The weather was ideal for the occasion and a crowd of approximately 40,000 witnessed the event. The City of Mount Clemens cooperated with the personnel of Selfridge Field in planning and advertising the races. The assistance of the Michigan State Police proved invaluable in handling the traffic. A considerable portion of the proceeds will be given to the Mount Clemens Community Fund and the Army Relief Society.

An interesting air program was staged which started at 11:00 a.m. and ended at 4:30 p.m. The final event was the John L. Mitchell Trophy Race, which was won by Captain Karl G.E. Gimmmler, who averaged 212.596 miles per hour for the 100-mile course.

The ten competitors in this race used P-26A airplanes, and averaged speeds as indicated:

Captain Karl G.E. Gimmmler,	212.596 mph.
1st Lt. Jarred V. Crabb,	211.930 "
Maj. Warren A. Maxwell,	211.439 "
Capt. D.C. Doubleday,	211.027 "
Capt. Lee Q. Wasser,	209.738 "
Capt. Paul M. Jacobs,	209.595 "
Capt. Norme D. Frost,	208.540 "
Capt. Earle E. Partridge,	208.400 "
Capt. Dixon M. Allison,	207.600 "
Major Edwin J. House,	206.317 "

It was necessary to place a wedge in the throttle stop to prevent excessive manifold pressure being attained, and the possible speed of the airplanes in the event was reduced accordingly.

The Junior Birdmen speed dash was won by 2nd Lieut. George A. Hatcher in a P-26A airplane, at an average speed of 244.516 m.p.h. over the mile course.

The Curtiss-Wright Trophy Race was staged by six pilots from the 8th Pursuit Group, Langley Field, using P-6E airplanes. This event was won by Lieut. C.B. Harvin at an average speed of 194 miles per hour.

All events were on schedule, with the exception of the mass parachute jump, which had to be omitted from the program in the afternoon on account of the strong wind.

Excellent air discipline was displayed by all pilots and, as a result, no accident of any kind marred the show. The interest displayed in the event by flyers, military as well as civilian, was demonstrated by the fact that 75 visiting pilots registered at the field during the day. Among the distinguished guests who attended were General Frank M. Andrews; General H.C. Pratt; General William Mitchell, the donor of the Trophy; General S.D. Imbick, General A. W. Robins, Colonel Edward

Rickenbacker; Major James H. Doolittle; Mr. Gar Wood and "Hell Roaring" Jones from Miles City, Montana.

---cOo---

CAUSE OF CRASH OF THE BOEING BOMBER

The findings of the Board of Officers convened at Wright Field, Dayton, Ohio, to investigate the cause of the crash on October 30, 1935, of the Boeing Aircraft Company Bombardment plane, model 299, were to the effect that the accident was not due to structural failure, or to the malfunctioning or failure of any of the four engines, the airplane control surfaces or the automatic pilot, but to the locked condition of the rudder and elevator surface controls (primarily the latter), which made it impossible for the pilot to control the airplane.

These findings were based on the locked condition of the controls after the crash; the testimony of Lieut. Donald Putt, co-pilot; of Mr. Leslie R. Tower, Boeing Aircraft Co. test pilot, as to the behavior of the airplane in the air, and the testimony of eye witnesses as to the behavior of the airplane on take off and in flight.

From the evidence submitted the Board reached the conclusion that the elevator was locked in the first hole of the quadrant on the "up elevator" side when the airplane took off, for had the elevator been in either of the "down elevator" holes on the quadrant or the extreme "up elevator" hole, it would have been impossible for the airplane to be taken off in the former case, and in the latter case the pilot could not have gotten into the seat without first releasing the controls. With the elevator in this position they are inclined at an angle of 12½ degrees.

During the take-off run the airplane could not assume an angle of attack greater than the landing angle of the airplane (7½ degrees) plus the angle of incidence of the monoplane wing to the fuselage (3 degrees) or a total angle of 10½ degrees. This would not be particularly noticeable to the pilot during the ground run.

However, as soon as the airplane left the ground, which several witnesses testified was in a tail low attitude, the elevators, with increasing power, varying as the square of the air speed (approximately 74 miles per hour at take-off), tended constantly to increase the angle of attack, until the stall was reached. The serve tab on the elevator also tended to aggravate this extreme tail heavy position, since with locked elevators, and the pilot pushing forward on the control column, the serve tabs were up, and themselves acted as small elevators on the fixed elevator proper.

Due to the size of the airplane and the

inherent design of the control system, it is improbable that a pilot, taking off under these conditions, would discover that the controls were locked until too late to prevent a crash.

The locked condition of the controls was due either to the possibility that no effort was made to unlock the controls prior to take-off, and as a result the controls were fully locked; the possibility that the pilot only partially depressed the locking handle and as a result the locking pin was only partially withdrawn from its hole in the face of the locking quadrant; or the possibility that the locking handle was fully depressed prior to take-off and, due to the malfunctioning of the system, did not fully disengage the locking pin. There was no evidence to show that the system had ever malfunctioned, but due to the inherent design it must be considered as a possibility.

---oOo---

GUARDSMEN OBSERVE NAVY FLIGHT OPERATIONS

"Gang way for the Navy!"

And the 41st Division Aviation, Washington National Guard, Spokane, stepped aside while three airplanes from the U.S.S. SARATOGA took command of the situation on the recent Navy Day celebration.

Leading the flight from Bremerton navy yard was an Amphibian and two Navy Scout planes. Accompanying Rear Admiral T.T. Craven and his party to Spokane by train was Commander Robert Molten, Executive Officer of the SARATOGA. Commander Molten and Major Robin A. Day, commander of the 41st Division Aviation, served together in the Canal Zone, and therefore found a great deal in common as they renewed acquaintances and discussed military aviation. Particularly interesting to officers of the National Guard Squadron was the description of the airplane Carrier by pilots on the flight and the hangar demonstration of the use of the "Navy hook" in landing on deck.

It was stated that the U.S.S. RANGER, carrier, will make a cruise into northern waters this winter for the purpose of experimenting with landings and take-offs from the icy deck of the Carrier. This was said to be the most serious problem confronting Naval Aviation on the Carriers. It was stated that on an icy deck take-offs are extremely difficult, because the pilot has little control over his airplane, while the landings are easier as a result of the tail-skid "hook" which pulls down the airplane as it nears the deck.

Officers of the SARATOGA extended an invitation to officers of the 41st Division Aviation to visit the Carrier while it is in dry dock, promising to explain all the operations "aboard ship."

TEMPORARY PROMOTION OF AIR CORPS OFFICERS

To Lieutenant-Colonel

Major Edmund W. Hill assigned as Air Officer on the staff of 6th Corps Area Commander, Chicago, Ill., November 13, 1935.

To Captain

1st Lieut. Lawrence H. Douthit assigned Flight Commander, 95th Attack Squadron, March Field, November 13, 1935.

1st Lieut. Guy F. Hicks assigned Flight Commander, 34th Attack Squadron, March Field, November 13, 1935.

1st Lieut. George H. Sparhawk assigned Flight Commander, 51st Attack Squadron, Maxwell Field, Ala., November 13, 1935.

1st Lieut. John B. Ackerman assigned Flight Commander, 86th Observation Squadron, Maxwell Field, Ala., November 13, 1935.

1st Lieut. Joseph A. Bulger assigned Flight Commander, 33rd Pursuit Squadron, Langley Field, Va., November 18, 1935.

1st Lieut. Stuart G. McLennan assigned Flight Commander, 37th Attack Squadron, Langley Field, Va., November 18, 1935.

1st Lieut. Richard A. Grussendorf assigned Flight Commander, 37th Attack Squadron, Langley Field, Va., November 18, 1935.

To First Lieutenant

2nd Lieut. Edward J. Hale assigned Engineer Officer, 87th Pursuit Squadron, Maxwell Field, Ala., November 13, 1935.

2nd Lieut. Daniel I. Moler assigned Engineer Officer, 86th Observation Squadron, Maxwell Field, Ala., November 13, 1935.

2nd Lieut. Clayton B. Claassen assigned Transport Officer, 84th Service Squadron, Maxwell Field, Ala., November 13, 1935.

---oOo---

Captain Edgar A. Sinmyer, Jr., was relieved Nov. 18, 1935, as Flight Commander, 33rd Pursuit Squadron, Langley Field, and assigned as Intelligence and Operations Officer of this squadron.

Captain Raymond Morrison was relieved from assignment and duty with the GHQ Air Force at Hamilton Field and directed to report to the Commanding Officer of that field for duty with the Station Complement.

Major Arthur G. Hamilton was relieved from assignment, duty and temporary rank with the 39th Service Squadron, Hamilton Field, and assigned as Operations Officer, Station Complement, at that field.

---oOo---

ORDNANCE OFFICER VISITS BARKSDALE FIELD

Brigadier-General Edward M. Schinkle, Assistant Chief of Ordnance, arrived on November 4th at Barksdale Field, La., from Langley Field, Va., in a large Douglas Amphibian plane, after a non-stop flight of approximately seven hours.

General Schinkle spent two days at Barksdale Field inspecting those features thereof in which he was interested.

"AND I LEARNED ABOUT FLYING FROM THAT."

Frequently the News Letter will publish unsigned articles on this subject with a view to providing two or three minutes of entertainment for the reader and at the same time convey some useful lesson or moral. Contributions will be gratefully received by the Office of the Chief of the Air Corps. In keeping with the policy of the majority of publications that anonymous material is not desired, each article submitted should be signed by the writer.

Any experience in your flying career, the narration of which might aid other pilots, will be a worth while contribution and may actually avert pain, disappointment and expense.

Twelve o'clock noon, and I gazed from the cockpit of my O-38 airplane through a brown world at a thin, scarcely discernible line some seven or eight hundred feet below. It was parallel to my path of flight, because I was following it intently. It was only a country road running parallel to the Pasotex pipe line leading from Wink, Texas, to that oasis known as El Paso.

Gradually the shade of brown deepened and I knew beyond all doubt that a Texas dust storm was at hand. The little radio station in the Guadalupe Pass gave a visibility report of one-eighth of a mile, with heavy dust clouds all around. I looked again at the pipe line and suddenly craved to return to Midland, a hundred miles behind. At about the same time I decided to check my fuel supply. Dust and a reflecting gauge glass accounted for a few seconds with my eyes inside the cockpit. When I again looked below, the road and pipe line were gone. Only brown atmosphere was there. I eased down a couple of hundred feet, but did not hunt the road longer for fear I might find it. I was not experienced enough to venture down through, so I nosed her up and in the general direction of El Paso.

Ever rougher and rougher became the air, and at times it seemed as if it would be impossible to get straightened out without the use of the bank and turn indicator. But eventually everything comes to an end, and the brown clouds became thinner and thinner, and in a moment I popped out into brilliant sunlight. I glanced at the altitude meter and it registered just under 14,000 feet. I could hear the reassuring calls of the beacon from El Paso, and noted the broadcast gave a visibility of 30 miles. A moment or two later the same voice stated: "This station will be off the air until further notice."

The previous compass course was followed, and after what seemed like a long

time an old salt flat and a hill nearby became visible. A little bit later it was noted that I was from 12 to 14 miles off my course.

Eventually, El Paso came into view, and the old balloon hangar with the Army's largest sign was, indeed, a welcome sight. Somewhere in the thick dust clouds behind me was the entire range of the Guadalupe Mountains, Guadalupe Pass, radio station and all.

From this little incident I learned that one should be very careful about determining the exact course while the radio beacon is with him. My large error in navigation was probably due to drift for which I had not corrected at the proper time.

----oOo----

JAPANESE OFFICERS VISIT SELFRIDGE FIELD

Eight officers of the Imperial Japanese Army, having been authorized by the War Department to visit the First Pursuit Group, Selfridge Field, Mich., arrived on the post at 10:00 a.m., October 30th. The group included Major-General S. Ito, Lt.-Cols. Y. Sakaguchi, T. Ogawa, Majors S. Yenosawa, Y. Kimura, I. Imagawa, M. Kanda, and Engineer K. Miura. Lieut.-Colonel Royce met the party at the main gate upon its arrival, and greeted the General with a salute of thirteen guns. Luncheon was served the party at the Officers' Club, after which the Japanese officers were conducted over the post and afforded the opportunity of witnessing flying training, following which they departed for Detroit.

----oOo----

SUPPLIES FOR THE FIRST WING MANEUVERS

A total of 142 tons of bombs and 253,000 rounds of caliber .30 ammunition is being used in the maneuvers of the First Wing Nov. 4-17 in the San Joaquin Valley. This was disclosed by Major Ray A. Dunn, Supply Officer of the 1st Wing, who further stated: "We will use 1170 fifty-pound bombs during this maneuver and 2233 one-hundred-pound bombs. The bombing will all be done on the Muroc Dry Lake Range on the Mojave desert. Only a small charge of explosive will be used, as accuracy in making hits will be the prime consideration."

The camps are being supplied with food through the medium of the service squadrons, they in turn securing the edibles through the advanced depots at March and Hamilton Fields. It was determined that over 125,000 gallons of gasoline and 17,214 gallons of oil will be used by airplanes participating in this maneuver, the expense of which being covered by utilizing funds normally used in the home posts. No additional expenses are incurred.

V-6898, A.C.



AIR CORPS FIELDS

San Antonio Air Depot, Duncan Field, Texas.

Congressman John J. McSwain, of South Carolina (Chairman), and Congressmen J. Joseph Smith, of Connecticut, and John M. Costello, of California, of the House Military Affairs Committee, with their Secretary, Mr. Robert Frazier, visited this Depot on October 31st during a two-day stop in San Antonio on their recent air tour of inspection of the military stations of the United States in connection with the Army improvement program. They were accompanied on this visit by Congressman Maury Maverick, of this District; Major-General Johnson Hagood, 8th Corps Area Commander; Brigadier-General James E. Chaney, Air Corps Training Center Commander, and Mr. L.B. Clegg, Chairman of the San Antonio Chamber of Commerce Military Affairs Committee.

Captain S.M. Unstead, of Wright Field, flying a C-4, with Congressman Tilman P. Parks as passenger, was forced down at Amarillo, Texas, on October 28th, with engine trouble, and civilian mechanics Stone, Milhen and Gast, piloted by Master Sergeant C.P. Smith, were sent from this Depot by air to make the necessary repairs. Congressman Parks, of the House Appropriations Committee, was returning from his recent nation-wide air tour of inspection of military stations.

Major Benjamin F. Giles, Air Corps Instructor with the California National Guard, Los Angeles Airport, piloting an O-42A to Houston, Texas, passed through here October 30th and greeted old friends at the Depot. Major Giles was formerly Technical Supervisor of this Control Area.

Second Lieut. Ainsley E. Stuart, Air Res., of the 8th Corps Area assignment group and a resident of San Antonio, reported November 1st for a 14-day active duty training tour at this Depot. In civil life Lieut. Stuart is an aviator for the Mexican Government.

Mr. D.L. Garber, Instrument Instructor with the Sperry Gyroscope Company, Brooklyn, N.Y., arrived at the Depot on October 23rd for a visit of several days, conferring with the Depot Engineering Department on Gyroscope maintenance matters.

This Depot is making repairs to the TC-13 airship, commanded by Captain L.A. Lawson,

which landed at Brooks Field on October 26th enroute to the new Air Corps station, Moffett Field, Sunnyvale, Calif., and which sustained considerable damage in an attempted take-off from Brooks Field on the 29th. Two civilian experts are being sent from Scott Field, Ill., to supervise the repairs.

Selfridge Field, Mt. Clemens, Mich., Oct. 31.

The quarterly test of airplanes with full military load was conducted by the 1st Pursuit Group on October 30th. Upon completion of the flying mission in this connection there was a ground inspection by the Group Commander of all airplanes, with crews standing by, on the hangar line.

Having been appointed a member of the board appointed to meet at Wright Field, Ohio, to evaluate as to the utility of characteristics of certain Pursuit airplanes, Lieut.-Colonel Ralph Royce, Commanding Officer, departed from this station on October 21st for that station, returning on the 24th.

Hamilton Field, San Rafael, Calif., Oct. 31.

Keynoted by a spirit of sportsmanship and fair play, the second in the series of boxing programs, sponsored by the Hamilton Field Recreation Committee, was staged on October 25th to an appreciative and near capacity crowd of 1250 people. These programs are doing much to promote good will and understanding between the military personnel and the many civilians who attend the fights.

Meeting the Petaluma Tennis Club on the local courts on October 27th, the Hamilton Field Tennis Team won a decisive victory from the racquet wielders from the Egg City. Boasting a well balanced team and four beautiful courts for match play, the soldier team feels that it is now in a position to challenge the best in the country.

Lewis and Brosius, the number 1 and 2 players for the soldiers, played consistently steady tennis to defeat their opponents. The doubles team from the field clinched the match by winning all of their scheduled games. Overcoming the stubborn resistance of a plucky Petaluma team, the soldiers' doubles team swept on to victory due to their stormy of-

ensive playing. A return match is expected in the near future.

Private Richard H. Smith, 70th Service Squadron, died at the Station Hospital on Oct. 29th, as a result of injuries sustained when struck by an automobile near Hamilton Field.

First Lieut. Millard Lewis was appointed Supply Officer, Miscellaneous Troops.

Captain F.L. Anderson, Jr., was relieved as Post Nursery Officer and Officer in Charge of SERA activities.

Langley Field, Va., November 6th.

The personnel of the 20th Bombardment Squadron deeply regret the death of Flying Cadet Frank W. Brendle, who was fatally injured in a crash while flying a BT-2A1 type airplane at Smithfield, Va., on October 20th.

Flying Cadets M.E. Thayer and C.E. Bodman recently arrived at this station and were assigned to the 20th Bombardment Squadron for training.

Captain Glen O. Bareus recently reported to the 37th Attack Squadron for duty, he having been stationed in the Hawaiian Department.

Barksdale Field, Shreveport, La., Nov. 9th.

Mr. Waddell Smith, of the Lincoln Life Insurance Company of Fort Wayne, Ind., honored Barksdale Field by presenting a beautiful and very valuable "over and under" shot gun to the Post to be used as an annual Trophy for skeet shooting by all officers of the command. The gun remains the property of Mr. Smith and is to be returned to him or his heirs in September, 1939. The winner of the annual skeet shoot is given possession of the gun for one year, and no one can win it for two consecutive years. The contest was held on October 29th and 30th on a handicap basis. Thirteen birds out of 25 were required to qualify, and the handicap was set at one half of the distance between qualifying score and 25. The second day's shoot was between those qualifying on the first day.

On the basis of 50 targets, Colonel Gerald C. Brant and Major Roy W. Camblin were tied with scores of 46. In the shoot-off, Major Camblin scored 26 (23 plus handicap) against Colonel Brant's 24, and is announced as the 1935 winner. The scores of the first nine officers were as follows:

Name	Score	Handicap
1. Major Camblin	46	3
2. Colonel Brant	46	2
3. Lieut. Burkhalter	45	5
4. Lt.-Colonel Harmon	44	5
Captain Smith	44	4
5. Major Percy	43	6
Lieut. Carver	43	4
6. Captain Baxter	42	6
Lieut. Coutlee	42	5

Sunday, November 10th, was set aside for an aerial demonstration in the expectation of raising considerable funds to be distributed between the Army Relief Fund and local Communi-

ty Chest and Red Cross Chapters. A large attendance was anticipated, as the community is very air-minded and has taken an active interest in Barksdale Field ever since it was first occupied. It was planned to include in the aerial program firing of machine guns and dropping of bombs at ground targets by both Pursuit and Attack formations, in addition to the usual features of such exhibitions. It had just been learned that General Andrews was enroute to Barksdale Field and the hope was expressed that he would be able to remain and view the demonstration.

Richards Field, Kansas City, Mo.

A hunting trip by our KO, our genial and sharp-shooting Field Manager and various others yielded several Pheasants, gobs of wet feet and plenty of bacon and eggs. The fields were so wet that our KO couldn't use his usual method of running down the birds.

Our annual Halloween Party was, for some unknown reason, not.

The active duty season being over, approximately 75 of our Reserves are very busy qualifying for promotion via the Extension School route.

In the good old days Ye Scribe remembers an outfit in good old New England that used to Razz us Cowboys about our flying. How about it? Can't you all navigate these new issue pencils?

Johnny Ranson, Duke Hillman and Tony Hunter all returned safely from the Air Corps Reserve Convention.

Notice to visiting pilots who desire 40-hour checks at this station: Please arrive equipped with a good eraser so that we can erase the red diagonals from our own charts.

Kelly Field, San Antonio, Texas, November 4th.

The first game of the 1935 season in the Army Football League, 8th Corps Area, was played at Kelly Field on October 30th, between Kelly and Randolph teams. Randolph was known to have a good team, and Kelly, which won the championship last year, was on the short end of the betting. However, by playing real college football, Kelly managed to come out on top with a 14 to 0 victory. Coaches of other teams in the League are now planning to point their team for games with Kelly Field. It took Randolph's best battling to keep the score down to 14 points, as Higginbotham, et al, romped through holes opened by Kelly's extremely good forwards, including the "Methuselah of the Moleskins," Corporal Sigmund Mlyneczak, who has been playing army football hereabouts since the World War.

Higginbotham's runs and passes were features of the game. He threw a pass to Detloffs for the first tally in the opening quarter and passed to Lewis for the other in the second period. Randolph got going once - at the close of the second quarter, but the whistle stopped the Ramblers as they neared the Kelly goal.

The starting lineups were: Randolph - Thomas, l.e.; Decker, l.t.; Lawdy, l.g.; McDonnell, c.; Turner, r.g.; Thurman, r.t.; Gillanders, r.e.; Choat, q.b.; Christie, l.h.; Wright, r.h.;

Lamb, f.b. Kelly Field - Cheek, l.e.; Mylinczak, l.t.; Beare, l.g.; Hallowell, c.; Flagler, r.g.; Wallace, r.t.; Detloff, r.e.; Lyons, q.b.; Jones, l.h.; Pozniak, r.h.; Higginbotham, f.b.

In the second game of the season, Nov. 2nd, at Fort Sam Houston, Brooks Field won from the 12th Field Artillery by a lopsided score.

The Kelly Field team is being coached by Captain Wallace E. Whitson, assisted by Lts. Edward J. Timberlake and Richard A. Legg.

The Bowling League at Kelly Field is progressing nicely, with the 40th Attack Squadron leading the way. Interest is very keen, and some of the teams now near the bottom promise to give the best of them a battle before it is all over.

Air Corps Tactical School, Maxwell Field, Ala.

On October 25th, the Air Corps Tactical School closed down activities as much as possible and joined forces at the athletic field to participate in the first Track and Field Meet held in over a year. A beautiful trophy was the reward to the organization compiling the most points of the meet. Each track event and the Kitten-Ball and Volley-Ball Leagues were allotted points for first, second, third and fourth places. All track events were completed in the morning, and at noon the 87th Pursuit Squadron was ahead of the field by several points.

The A.C.T.S. Det., working their way to the finals, were playing the 54th Bomb. Sqdn. in both the Volley Ball and Kitten Ball finals to cop the coveted Trophy, and "were out to win." The first Volley Ball game went to the 54th, but the A.C.T.S. Det. took the next three, winning 30 much needed points. The 30 points awarded the winner of the Kitten Ball game would win the Trophy for the Detachment, and win it they did, scoring six tallies against four for the 54th.

The Field Meet was declared a big success by all the personnel at Maxwell Field. Capt. Hughes, Post Athletic Officer, was awarded a vote of thanks for his untiring work, and thanks were extended all those helping to make the meet such a success.

The A.C.T.S. Det. accumulated 85 points; 54th Bomb., 61; 84th Service Sqdn., 60; 87th Pursuit, 46, and 86th Obs. Sqd., Spare Parts, and 51st Attack a lesser number. The 24th Inf. Band from Fort Benning furnished very much appreciated music throughout the Track Meet, and then assembled in Hangar #6 at 8:00 p.m., and furnished music for a dance for the enlisted personnel of the Field until midnight.

Hawaiian Air Depot, Luke Field, T.H.

The fourth birthday or Organization Day of the Depot on July 1, 1935, passed without any celebration, due to a number of reasons, chief among them being a tremendous amount of work. It was decided, however, to observe and celebrate Organization Day on October 19th with a picnic for the entire Depot at Kailua, on the

leeward side of the Island of Oahu, and to stage a program of athletic events and entertainments for the approximately 600 people expected to attend.

Since the recent reorganization of the Supply Department, all employees have "shaken down" in their new assignments, and things are going along very smoothly. It is particularly gratifying to note the close cooperation and coordination developed between the Supply and Engineering Departments. The matter of anticipating supply requirements has been worked out in a most satisfactory manner and will, it is believed, result in improved production figures.

Luke Field, T.H., October 17th.

50th Obs. Sqdn. A six-plane formation participated in the Aerial Review for the Secretary of War on October 4th.

First Lieut. Emery S. Wetzel was appointed temporary Captain Oct. 2nd, and assigned as commander of the second flight.

Flotation gear was installed on all planes preparatory to making inter-island flights on October 5th and 6th. Lieut. R.A. Stunkard was checked off as Amphibian Pilot and designated to fly the Amphibian on the squadron's inter-island flight.

The Squadron, led by Major L.V. Beau, Jr., with a 9-plane formation, took off at 8:00 a.m. October 10th for an inter-island flight to Niihau and Kauai. After spending the night at Port Allen, the flight returned to Luke Field on the morning of the 11th.

The Communications Department has produced, under the technical supervision of Lieut. Stewart, what we believe to be the "Master Brain Child" of the season. Constructed from such material as old telegraph relays, phonograph springs, and the like, we find that a distinct note may be read from various positions while flying over Luke Field. This masterpiece is a so called "Beacon Transmitter" and we must add, with due regard to the constructive genius of the department, that it is an odd gadget, but it works, and that factor alone compensates the boys in the radio department for their hours of toil.

4th Obs. Squadron: The Squadron recently participated in the Departmental Review for visiting Congressmen at Schofield Barracks, T.H. All available men not needed to crew the participating ships were paraded on foot.

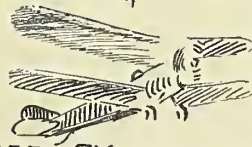
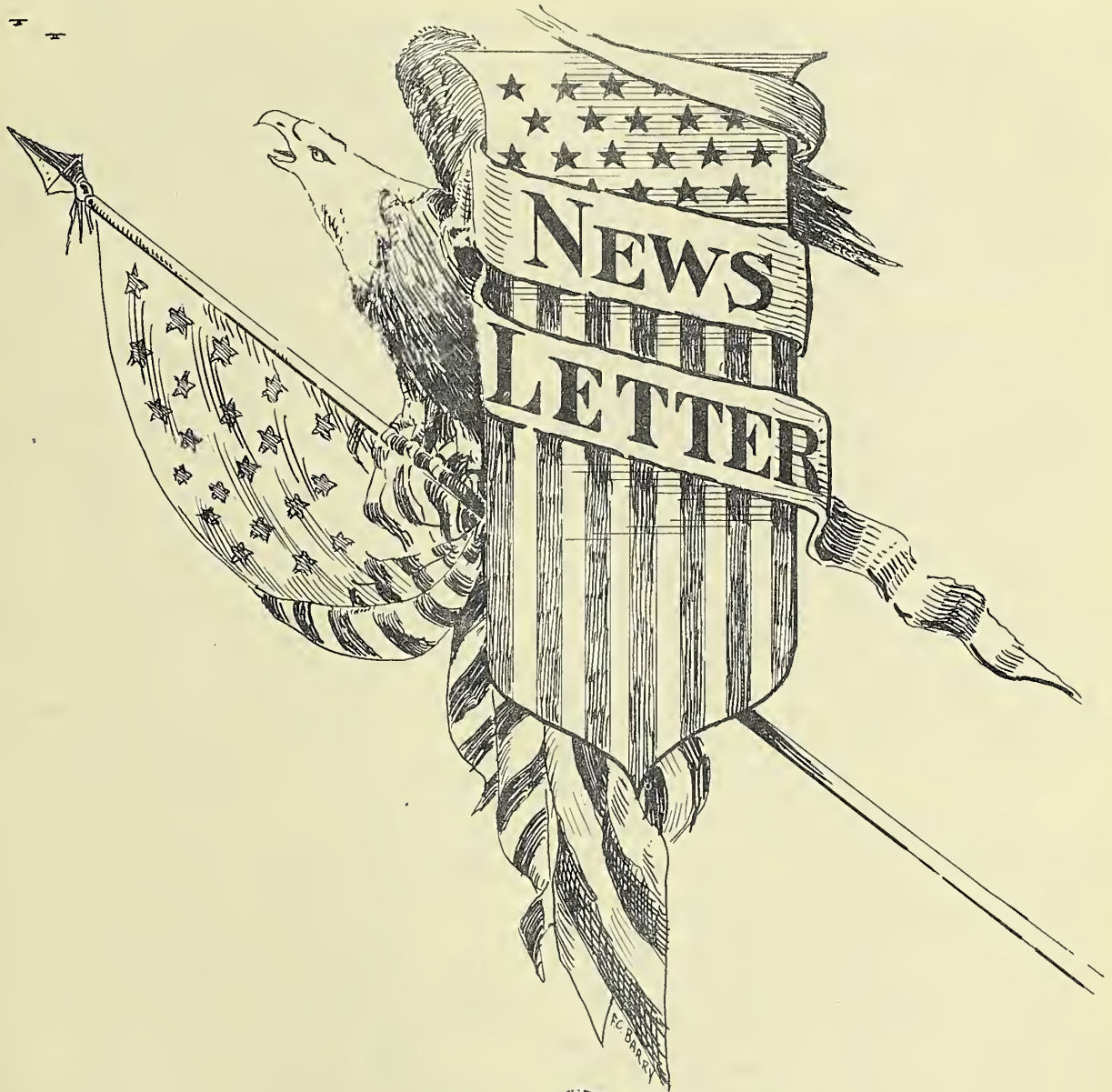
A flight of 12 planes, with 12 officers and 12 enlisted men, under command of Major F.H. Pritchard, made an Inter-Island flight to the Island of Kauai to familiarize personnel with outlying fields, terrain, servicing facilities and discipline away from home airdrome.

The Squadron finished its course in pistol marksmanship, qualifying 50% of the men in the organization, with a good percentage of experts.

23rd Bomb. Squadron: Lieuts. Maurice C. Bisson, Operations Officer, 23rd Bombardment, and Joseph J. Ladd, leader of Flight "B," were temporarily promoted to Captain on October 1st.

The Squadron led a Wing Review in honor of the Secretary of War.

AIR CORPS



ISSUED BY
THE OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT
WASHINGTON

Information Division
Air Corps

December 1, 1935

Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---oOo---

THE STRATOSPHERE FLIGHT

ANNOUNCING during the course of a coast to coast radio broadcast on the evening of November 21st that the Contest Board of the National Aeronautic Association acted that afternoon to approve the mark of 72,395 feet above sea level as the official altitude of the Explorer II, the balloon of the National Geographic Society-Army Air Corps Stratosphere Expedition, Mr. William Enyart, Secretary of the Contest Board, stated that this figure was based upon calibration reports of the National Bureau of Standards experts who have been working on the problem since the arrival in Washington a week before of the sealed meteorograph taken while on the flight.

The Contest Board of the NAA, Mr. Enyart stated, will report the details of the flight to the Federation Aeronautique Internationale in Paris immediately, with the request that international certification be given this altitude as a new official world mark. In placing the sealed meteorograph in the Explorer II and in approving the 72,395 foot altitude, the NAA Board acted in its capacity as the representative of the FAI in the United States.

The previous official world altitude mark has been credited to Lieutenant-Commander G.W. Settle, U.S. Navy; and Major Chester L. Fordney, U.S. Marine Corps, who reached an official height of 61,236 feet in November, 1933. The Explorer II ascent betters their performance more than 11,000 feet.

Explaining the methods employed by the Bureau of Standards in testing the instruments carried by Captains Stevens and Anderson to ascertain the altitude reached by the Stratosphere Balloon, Dr. Lyman J. Briggs, Director of that Bureau, stated that in order to determine altitude it is necessary to have continuous records, both of the pressure and the temperature of the air in which the balloon is floating. The instrument used for measuring the pressure contains a hollow metal box with very thin flexible sides, which are folded or pleated like an accordion. As the air pressure on this closed box decreases the box lengthens and its movement is recorded as a curved line drawn on the smoked surface of the drum driven by a clock. A smoked surface is used

in place of ink and paper because sharper lines can be obtained and ink would freeze at these low temperatures; in fact, it is difficult enough to get the clocks to run satisfactorily at temperatures 70 degrees below zero. Three of these pressure measure instruments were carried by the stratosphere balloon flight, one suspended thirty feet below the gondola and two others on top. All these instruments agreed closely regarding the minimum pressure reached by the stratosphere balloon.

In addition to the pressure, it is necessary to know the temperature of the air all the way from the ground to the highest altitude reached. This was measured by the change in the electrical resistance of a coil of wire located on a long arm projecting from the gondola and protected from the sun's heat by a series of shields. A little fan blew a strong blast of air over the resistance coil continuously in order to bring it to the temperature of the air.

During the past week, Dr. Briggs stated, Dr. Brumbacher and his staff have been studying these instruments and comparing their performance with the laboratory studies of the same instruments made before the flight. The instruments have not changed and the records are, therefore, reliable.

Congratulating Captains Stevens and Anderson on behalf of the Trustees and members of the National Geographic Society upon their achievement in reaching the highest altitude ever attained by man, Dr. John Oliver La Gorce, Vice President of the Society, questioned Captain Stevens on several details connected with the stratosphere flight.

"Captain Stevens, being higher than man has ever been before you and Captain Anderson viewed more of the earth in one eyefull than any other person has ever seen, can you tell us how large an area was visible to you from nearly fourteen miles up?"

Captain Stevens: We could see in every direction for at least 200 miles. The earth was always in plain view underneath us.

Dr. La Gorce: What did you say to Captain Anderson at fourteen miles high, that is, do you recall the first words spoken at that altitude?

Captain Stevens: We were discussing the last reading of the thermometer showing

the gas temperature on top of the balloon. It registered zero centigrade.

Dr. La Gorce: How does it feel to be in a balloon at that great altitude?

Captain Stevens: We could tell our elevation after we passed the 40,000 foot mark only by looking at the gauges.

Dr. La Gorce: There are many questions that have been asked in the hundreds of letters received from all over the country. Were any instruments damaged in any way or did any of them fail to function properly?

Captain Stevens: No instruments were damaged, and so far all of the records that have been developed have come out good.

Q. What instruments determine the official record?

A. A meteorograph that hangs ten meters above the balloon.

Q. What is the object of taking spores that high, to see whether they live despite the intense cold or are affected by a rarified air?

A. Sunlight tends to kill the spores. However, most of the spores that were carried have survived the flight.

Q. What was the lowest temperature recorded during the entire flight?

A. A temperature of 78 degrees below zero was observed at 41,000 feet.

Supplementing Dr. La Gorce's observation that evidently it was not so cold at 72,000 feet as at 41,000 feet, Captain Stevens stated that in general the temperature decreases after one reaches the 50,000 or 60,000-foot mark. "We will know more about the real temperatures on reading the films that were obtained on the descent of the balloon when the gondola was preceding the balloon in the flight," Captain Stevens added.

Asked if he was annoyed by the clatter and the hum of the many instruments in the gondola, Captain Stevens admitted that it was disconcerting, but chiefly because it interfered at times with their radio conversation.

Brigadier-General Oscar Westover, Acting Chief of the Air Corps, addressing Captain Orvil A. Anderson and renewing his congratulations on the fine achievement which was just confirmed by the official record as to the altitude reached on the stratosphere flight, asked him if the balloon responded easily when gas was valved out or ballast released.

"I could hardly say that it responded easily," Captain Anderson replied. "It would be more nearly accurate to say that it responded as easily as could be expected of a balloon of such size to respond. It was like steering a larger ship which is harder to turn than a small ship because of its mass and momentum. It was necessary to release a great deal of gas to slow up the rise, and we had to throw out a considerable

amount of ballast to get the balloon started upwards.

Gen. Westover: What was your most anxious moment during the flight?

Capt. Anderson: That is rather easy. It was during the first minute and a half of the flight. We had just risen above the rim of the cliff that encircles our take-off ground when a rather positive down-draft of air caught us and started the gondola downward toward the tree tops. We were only about seventy-five feet above the trees, and it was rather disconcerting for a few seconds. I released about 800 pounds of ballast, which was enough to overcome this downward force and to start us rising upward.

Gen. Westover: You say you released 800 pounds of ballast. How could you do that so quickly?

Capt. Anderson: It was by means of our electrical discharging system. We had sacks of ballast hung outside of the gondola, so we could open the bottom by exploding a dynamite type electrical discharging system. I was able to dump ten of the bags in less than ten seconds. If we had not installed this system, I do not think we could have dumped ballast fast enough to have saved the bag.

Gen. Westover: What was the appearance of the earth from your height?

Capt. Anderson: Why it was I should say an extension, so to speak, of the appearance from a higher airplane flight. We could look over very large areas but visibility was not very good.

Gen. Westover: What was the appearance directly before?

Capt. Anderson: The earth seemed like a huge mass. We could see the larger rivers and a few lakes very plainly. The towns and the regions over which we drifted were pretty small and it was hard to make them out from the highest part of our flight. Later when we approached the earth, we could see highways and towns quite plainly.

Gen. Westover: At what altitude did you open your manholes on the way down?

Capt. Anderson: At about 16,000 feet.

Gen. Westover: Was there a feeling of relief at being able to breathe fresh air?

Capt. Anderson: No, sir; we hardly noticed any difference. Our air conditioning system worked so well the air was good throughout the flight.

Gen. Westover: were you able to choose your landing place?

Capt. Anderson: Within certain limits. We were fortunately over good landing terrain when we approached the earth and the ground was not bad, so we were able to make an immediate landing.

Gen. Westover: Did your radio equipment function?

Capt. Anderson: Remarkably well. There was no time when we could not speak to someone on the ground and get an answer. It gave us a marked feeling of security to be able in this way to keep in continuous

touch with those on the ground.

Gen. Westover: Was there much of a jolt in landing?

Capt. Anderson: There was no jolt at all. We sank rather slowly to the ground, and just as the gondola touched we pulled the rip cord to let the gas quickly out of the balloon, and the gondola struck so lightly that it did not burst the inflated bumper on the bottom. It rolled slowly over on the side and it was not dragged for even a foot.

Gen. Westover: From an operative point of view, did you feel that the flight was a success?

Capt. Anderson: Yes, it was in my opinion successful beyond our hopes. There was no leakage of air from the gondola, and the balloon responded well to its controls. We reached a height greater than has ever been reached by man in a balloon, and all of the instruments functioned perfectly. Finally, and most important, we were able to bring all of the instruments and the records safely to earth without injury, and we believe that these records, which will be interpreted as rapidly as possible, will prove extremely interesting and we hope valuable additions to the world's scientific knowledge.

Gen. Westover: Was the air very thin at your highest point according to your own observations?

Capt. Anderson: Our means of observing the thinness by our own observation was through the action on a fan extended on an arm which was used for rotating the balloon. This fan at the higher altitudes had no effect at all and appeared to be running in a vacuum.

Dr. La Gorce asked Captain Anderson why it was necessary to discharge so much ballast on the descent. He said that the National Geographic Society received many letters of inquiry on this point.

Captain Anderson replied that at the peak altitude of the balloon the temperature of the gas in the bag was approximately 100 degrees fahrenheit. The condition of the gas at landing would be approximately 40 degrees fahrenheit, that is, over the outside atmosphere. This difference of temperature of approximately 60 degrees represents a positive lift in that as the temperature leaves the gas it contracts and reduces in lift. By computation it was estimated that about 2600 pounds of lift would be necessary to offset this contraction of the gas on returning to the ground. This computation worked out to be approximately true.

Newspaper editorial comment on the Stratosphere Flight were very interesting and worthy of note. An editorial in the WASHINGTON POST under the heading "Our New Frontier," was as follows:
"Scientific enlightenment expected to

flow from the findings of Cpts. Stevens and Anderson during their flights to the stratosphere does not explain the widespread interest in their exploit. Technicians will ponder over the balloon's instruments for new data on cosmic rays, meteorological conditions and electric currents. But the public sees something more in the flight. It may be that the public is right.

The very word "stratosphere" is new. In dictionaries published only a few years ago it is listed among the words that have just come into usage. Until Prof. Piccard went aloft in 1932 almost nothing was known of the upper reaches of atmosphere. Now this region is in the process of "being conquered." The current exploit grips our imagination, not because of any new scientific information it may bring to light, but because of the infinite possibilities opened by exploration of this new frontier.

In terms of distance the achievement may not be especially significant. These intrepid explorers got only 14 miles away from the earth. The important thing is that they did pierce that seemingly black void into which no human being has ever ventured and which our telescopes only vaguely reveal. That is a beginning. It may lead only to disappointment and destruction for those adventurous souls who will insist upon pushing ever farther into this forbidding region of the unknown. But that will not stop them. Nor will the inability of mankind to utilize the knowledge already in its possession arrest the struggle to untangle the still more baffling mysteries of the stratosphere. For beyond these first petty mileposts now established lies the universe.

Man has never been content with the nook in which he has found himself. There is no reason to suppose that he ever will be. Of course, it is idle to speculate on how far we may be able to push this new frontier outward into space. The one certainty is that man will continue to beat upon this barrier to new worlds. And after all, that may be the most important consideration."

"A vast public has watched with ever-increasing interest the stratosphere enterprise of the Army and the National Geographic Society," says the WASHINGTON STAR. "By grace of press, movies and radio, their four separate efforts to explore the upper skies have had a numerous audience. Yesterday's successful adventure especially enlisted the enthusiasm of the millions. There was a belief in a multitude of minds that Capt. Albert W. Stevens and Capt. Orvil A. Anderson would win victory at last, and the expectation was amply justified. * * * Thus, the entire voyage was an unmarred triumph for science, for the sponsoring agencies, for

the navigators and for the national spirit which prompted one trial after another in the face of difficulties and disappointments. * * * * The genius of the race, it seems, has been at work on the problem for a long time and with results indicative of still more thrilling penetration of the outer atmosphere. To Capt. Stevens and Capt. Anderson, then, and to all their predecessors, ancient and modern, a grateful salute from a myriad of admirers - people with the power to appreciate great performance!"

---oOo---

TAKE YOUR CHOICE

In an interesting article on the Stratosphere Flight, wherein the biographies of both Captains Stevens and Anderson were given, one newspaper had this to say regarding the first-named:

"Tall, dark and reticent, Captain Stevens, who is unmarried, is wont to belittle his accomplishments and only on rare occasions speaks of his experiences:"

In another newspaper, the following rather startling piece of information appeared:

"It is not often that a man gets a chance to make a date with a girl from 10 miles in the air, but Capt. Stevens made a definite engagement with his wife to meet her in Washington tomorrow night. She is now in Chicago."

It is not known whether or not Capt. Stevens was interviewed concerning these two conflicting statements regarding his marital status. If he was, the chances are that his reply would have been substantially to the effect that the allegation that he is a married man is "grossly exaggerated."

---oOo---

TC-13 AIRSHIP DAMAGED IN TAKE-OFF

The TC-13, second largest of Army "blimps," arrived at Brooks Field, San Antonio, Texas, on October 25th, en route from Langley Field, Va., to its new base at Sunnyvale, Calif. An advance party, flying in two Keystone Bombers, preceded the airship to make arrangements for and supervise landing and refueling at the various stopping points. This party carried a portable mast for use where hangar facilities were not available.

Unfortunately, when a take-off was attempted three days later, one of the mooring lines became fouled in the front landing wheel of the big airship, causing the wheel to give way. The ship skidded along the ground on the frame of the car, smashing the nose in and causing considerable damage. Repair work was completed on November 13th,

when the airship was test flown.

The TC-13 departed from Brooks Field at 7:30 a.m., November 19th, proceeding to its destination, via Biggs Field, El Paso, Texas, and March Field, Riverside, Calif., and arriving at Moffett Field, Sunnyvale, Calif., at 9:00 a.m., November 21st.

The personnel accompanying the airship included Captain L. A. Lawson, pilot in command; Warrant Officer R.E. Lassiter; Master Sergeants A.G. Miller and R. H. Short; Technical Sergeant R.G. Quinn; Sergeant C.A. Wheeler; Corporal M. R. Erhard; Private, 1st Class, William J. Gould, and Private E. J. Collins.

---oOo---

7TH BOMBARDMENT GROUP IN MIMIC WARFARE

With the departure of the Seventh Bombardment Group for Merced, California, its temporary home for a two-week period, Hamilton Field lost the major part of its military population.

Moving out bright and early on the morning of November 3rd, the Group took with it practically every piece of mobile equipment assigned. Only such transportation as would cover the barest minimum requirements of the post proper was left behind.

All four of the tactical organizations, the 9th, 11th and 31st Bombardment and the 38th Observation Squadrons, besides the 70th Service Squadron and details from the 69th Service Squadron and the 7th Bombardment Group Headquarters, departed to take part in this major phase of mimic warfare.

Remaining behind to garrison the post, the Station Complement is performing its usual duties of administration, guard, etc. The only other troops present are those of special units and part of the 69th Service Squadron.

---oOo---

INDOOR BICYCLE CORPS IN AIR CORPS DEPOT

Of interest to visitors at the San Antonio Air Depot, Duncan Field, Texas, is the fact that the interior of the Engineering Shops building is so huge that (about seven acres under one roof) that an "Indoor Bicycle Corps" is needed to carry on business between the widely separated sections of the building. Some fifteen to twenty bicycles, issued by the Post Quartermaster, are in constant use by Engineering Department employees in delivering instruments, small parts, etc., and in running errands inside of the building, which results in a very considerable saving of time.

---oOo---

General orders of the War Department, recently issued, announce the award of a Life-Saving Medal to Capt. Charles Y. Banfill, Air Corps, for rescuing four boys from drowning, June 23, 1932, in Boston Harbor. V-6909, A.C.

REPTILE JOINS GOLF FOURSOME

By the News Letter Correspondent

When a Cobra, most venomous of reptiles, raises his standard of living to the point where he chases golf balls over the Fairway in company with his two-legged contemporaries, then that popular pasttime stops being "Sugar-coated Hiking," and takes on the color of adventure.

It all happened on the 17th fairway of the Fort Stotsenburg, P.I., course, under the very eyes of Major H.I. Kraft, M.C.; Major P.D. Moulton, M.C. (A.P.); Captain F. W. Steed and Lieut. W. M. Morgan, Air Corps. As they approached a golf ball, they spied a six-foot cobra joining the foursome and attempting to reach the ball ahead of them. Needless to say, the cobra won the race, took the ball in its mouth and started off.

For the benefit of the uninitiated, it should be explained that a procedure such as this is not considered good golf etiquette, even among amateurs. Protests from the four alleged golfers and their caddies were of no avail. In fact, to quote Captain Steed (a short time later and before the story had reached unbelievable proportions) "He spread out like a newspaper, hissed and fought back at us."

Realizing the power of the press, and being unwilling to antagonize the "animated newspaper" more than necessary, our heroes retreated and formed a fifty-yard circle around the snake, making an estimate of the situation at the same time.

By a vote of 3 to 1, it was decided that Lieut. Morgan, because of his dexterity, courage, and lower rank, would be given the honor of acting as the assault echelon in the attack. Slowly and cautiously the gallant Morgan advanced, golf club poised for action, with the whole-hearted encouragement and moral support of the distantly following reserve echelons. As he approached, the cobra struck. For a brief moment it seemed that this must be the end, but NO! Morgan and his club wheeled for a quick retreat - and the dastardly deed was done.

The snake had failed to recognize the irresistableness of a golf club and in striking at Morgan came in contact with the head of the club and was instantly killed.

In an exclusive statement, made for the Air Corps News Letter, Major Moulton stated, in part: "I cannot too strongly emphasize the credit due Lieutenant Morgan in so ably assisting me in killing the cobra, thus making golf at Stotsenburg safe for women and children."

Too bad the News Letter cannot have a picture of this alleged golf-playing reptile - just for a keep-sake.

MOTORIZING NATIONAL GUARD AVIATION UNIT

Prospects of the 41st Division Aviation, Washington National Guard, Felts Field, Spokane, Wash., being motorized in time for the June annual encampment looked promising in a communication received by Major Robin A. Day, commanding officer, from Adjutant General Maurice Thompson recently.

The Adjutant General asked for an immediate estimate as to the number of trucks necessary to move the personnel and equipment across the State to Camp Murray, adjoining Fort Lewis. Major Day advised that 20 Chevrolet trucks of the type mentioned by General Thompson would be necessary.

In the assignment of trucks to the 41st Division Aviation, no additional cost for a garage will be necessary to the State, as one of the old metal hangars is still standing and will serve well as a garage for motor equipment.

If the trucks are issued before the June camp, it means a motor trip of about 400 miles across the State and over the Cascade mountains for the personnel and equipment. On such a trip, requiring at least two days for the caravan, it is likely problems will be executed between the group units and the flying personnel.

Such a problem would mean that overnight bivouacs would be held on one or more of the several improved airports across the State, thus making it possible for the flying personnel to contact their ground organizations before starting the final flight to the Fort Lewis airdrome.

At present the 41st Division Aviation has only a Chevrolet truck and ambulance, but is renewing its request for one of the reconnaissance-type cars now in storage at the Adjutant General's headquarters.

---oOo---

AMPHIBIAN AIRPLANE VERY STURDY

Brigadier-General E.M. Shinkle, Assistant to the Chief of Ordnance, on a tour by air to inspect Ordnance activities, arrived at the San Antonio Air Depot in an Air Corps OA-5A Amphibian, piloted by Major Eugene L. Eubank, Air Corps, of Langley Field, Va. While General Shinkle visited Ordnance Department activities in the vicinity of San Antonio, mechanics of the Depot worked through Wednesday night, November 6th, checking and tuning up the airplane for a take-off the following morning for Montgomery, Ala. This giant Amphibian could not be accommodated in the regular hangar at the Depot and it was necessary to house it in the Engineering Shops building, where it was an object of much interest to visitors. This ship is as sturdy as a yacht. On one V-6909, A.C.

occasion, it was said, when a forced landing compelled an overnight stay on the water, it was barely rocked by waves from a 35-mile wind.

---oOo---

JAPANESE OFFICERS VISIT KELLY FIELD

A party of seven Japanese Army officers and one civilian engineer visited on November 7th the Air Corps Advanced Flying School at Kelly Field, Texas.

The visiting party included Major-General Shuiro Ito, Director General of Engineering of the Japanese Imperial Air Service; Major I. Imagawa, Lieut.-Colonels T. Ogata, Y. Sakaguchi, S. Enosawa, Major M. Kanda and Mr. K. Miura, civilian engineer. Arriving by car from Randolph Field at 2:00 p.m., accompanied by General Chaney, they were met at the entrance to Kelly Field by Colonels Fickel, Richards and Captain Burwell.

The visiting party was divided into groups, each being accompanied by an officer from the field. They then visited the Pursuit, Attack, Observation and Bombardment training sections, the camera obscura bombing range, and the indoor miniature range. A class of students was receiving instruction in the Regulation of Artillery Fire at the indoor range when the visitors arrived, and illustrative problems were "fired" for the benefit of the visitors and the method of instruction explained in detail.

It appeared that some members of the party were most interested in obtaining information on maintenance engineering practices, while other groups were obtaining such information as they could by examining the aircraft in use, training methods, tactical employment of aircraft, and administrative details, respectively.

The visitors, accompanied by General Chaney, left Kelly Field about 5:00 p.m. the same day.

---oOo---

DEATH OF CAPTAIN BUCKMAN

The death on November 12th of Captain Donald Wells Buckman removed from the ranks of the Air Corps a promising young officer and a skillful Bombardment pilot. Captain Buckman was stricken by a heart attack midway between March Field, Riverside, Calif., and Bakersfield, Calif., while flying a Transport airplane, accompanied by three passengers, none of whom were aware of the pilot's condition until after he brought the plane down to safety at the Bakersfield airport. Stepping out of the plane, Captain Buckman collapsed in the arms of airport attendants. He was carried to a hangar, where he died shortly afterwards. Just prior to his

death, he said he had been seized with a pain in the region of his heart when he was over the Mojave desert.

Captain Buckman was born at Portland, Oregon, April 10, 1901. He attended grammar school and high school in that city, and was a student at the Oregon Agricultural College, Corvallis, for two years. A private and noncommissioned officer with the 162nd Infantry, Oregon National Guard, for 4½ years, and a Staff Sergeant, 321st Observation Squadron, 96th Division, Air Service, for several years, he saw service on the Mexican Border and, during the war, in France, where he was a member of the First Division machine gun battalion.

Following his appointment as a Flying Cadet and his graduation from the Advanced Flying School, Kelly Field, Texas, he was, on October 20, 1928, appointed a second lieutenant in the Air Reserve, rated "Airplane Pilot," and assigned to active duty at Langley Field, Va. Four months later he passed the examination for a commission in the Air Corps, Regular Army, and continued on duty at Langley Field with the 2nd Bombardment Group.

Completing a tour of duty in the Panama Canal Zone, Captain Buckman was transferred to March Field, Calif., where, by virtue of performing the duties of Supply Officer, he was given the temporary rank of Captain.

The Omaha STAR published the following editorial in connection with the last flight of this officer:

"TRADEIIONS OF THE AIR.

Aviation from the beginning has had ideals, but gradually it also is developing traditions. Thus it may be said to be following the customary pattern of human enterprise, whereby new activities start with dreams, move forward by experiment and at last are codified in governing principles. Medicine and law, obviously, reflect that variety of steady growth. The arts, the crafts and commerce almost as definitely have grown to maturity through unnumbered centuries of time. Plain folk summarize the interplay of cause and effect when they speak of a captain remaining on the bridge of his ship the while it sinks and an engineer holding fast to the throttle in an emergency which may occur during the run of his train.

Capt. Donald Buckman, perhaps, never paused to think of such things. He had been trained in the Army, and faithfulness to duty was instinctive in his mind. So it happened that, when he suffered a heart attack in midair a hundred miles from Bakersfield landing field, he did not collapse in panic and wreck his plane in the Mojave Desert. A power which he probably did not suppose he possessed helped him to complete the trip, bring his three passengers down safely and preserve his transport machine without damage. The ordeal was fatally severe, but the man himself was greater than his suffering. He

V-6909, A.C.

died before assistance could be summoned, yet not before history had written his name on a page of an immortal book.

To a philosopher the incident signifies a basic value in the evolution of the human race. Age after age, it seems, work increases in noble dignity and the competent performance of any assigned task takes precedence over purely personal interest. Victory and success, of course, are expressions of the soul of man, not self-created values. But, especially when a social factor is involved, the job has an importance which transcends that of the individual responsible for it. Actors epitomize the thought in the doctrine that 'the show must go on.'

Thousands of his countrymen paid Capt. Buckman the tribute of remembering in connection with his passing the beautiful words: 'Well done, good and faithful servant.' He could ask no richer fame, no rarer homage. A universal public is grateful for his inspiring example."

---oOo---

APPROVES EMERGENCY LANDING SYSTEM

The Air Corps Detachment at Fort Lewis, Washington, voices its approval of the emergency landing system developed at Chamute Field, Rantoul, Ill. This system has been used at Fort Lewis for the past two years and has proved to be quite satisfactory. The method employed and the equipment used at Fort Lewis vary somewhat from that at Chamute Field. Ordinary highway obstruction markers of the kerosene torch type are used for marking the outline of the air-drome. In addition to this, a directional "tee" of green railway fuzes is placed at the point on the airdrome where the pilot should land.

This method could be used practically anywhere in emergency.

---oOo---

GROUNDING PLANES DURING ELECTRICAL STORM

A Navy Department press release records the fact that recently, as the last plane of VP Squadron Five was being towed into the hangar during an electrical storm, the man operating the dolly guide received a static charge of electricity through his person. It is further stated:

"For some time this squadron has employed a grounding scheme by attaching a dangling training chain to tail dollies as is commonly employed by the ordinary commercial gasoline truck.

It appears from investigation that the plane had built up a static charge and the moment the ground lead bounced clear of the deck as it crossed the bumpy hangar door guard tracks, the man at the dolly received the full electrical

charge. The operator, Seaman Moore, suffered no bodily harm, only the physical shock and fright which caused him to let go and to jump some six feet clear of the deck.

It is recommended that the practice of so grounding planes during electrical disturbances be adopted by all squadrons. It is observed that Pan American Airways in their operation from the Fleet Air Base ramps are very obedient in grounding their planes. They employ a ball and chain scheme similar to the round horse weight which was used by the antiquated milkman. This squadron is advised that this grounding scheme was adopted by Pan American after the loss by fire (static electricity) of a large Sikorsky on their ramp at Miami Beach."

---oOo---

FIELD EXERCISES BY FORT LEWIS DETACHMENT

The Air Corps Detachment stationed at Fort Lewis, Wash., returned on October 26th from its two weeks' annual field exercise held at Salem, Oregon. The majority of the personnel, as well as equipment, were transported by air. This arrangement proved more satisfactory than trucks for this purpose.

---oOo---

LANDING FIELD IMPROVEMENTS AT FORT LEWIS

The construction of a warming-up and taxi apron of concrete is under way at Fort Lewis, Washington. This project was delayed temporarily because of freezing weather, but is now nearing completion.

The landing area has been increased 300%. The field is of irregular shape and contains about 600 acres in all. Over half of this area is suitable for landings and take-offs. The rest is being levelled sufficiently to serve as a parking area in case it is desired to use the site as a base for Air Corps maneuvers. It is estimated that 300 planes of assorted types could be operated from the field efficiently. The landing area is over 300 feet across in almost any direction, and is marked by a white concrete circle. The surface is of natural gravel and is never soft. No lighting equipment is installed, but emergency equipment is satisfactory for pilots familiar with the field.

---oOo---

The monthly Control Area Supply and Engineering Conference and Luncheon at the San Antonio Air Depot was held on November 5th, and was attended by Colonel J.E. Fickel, Commanding Officer of Kelly Field; Colonel Henry W. Harms, Commanding Officer of Randolph Field, and eleven other officers from various Air Corps activities, also officers of the Depot.

V-6909, A. C.

It was back in the year 1926, B.I. (Before Instruments), that I was flying in a P-1C airplane from McCook Field, Dayton, Ohio, to Bolling Field, D.C. Weather conditions were ideal all the way to Cumberland, Md., but here a great bank of clouds extended from the mountain peaks to about 8,000 feet.

On the trip from McCook Field to Cumberland I had been flying at 4,000 feet and had carefully checked my compass course. Being unable to go under the clouds from Cumberland on the course to Washington, I landed at Cumberland in order to obtain a weather report. In a few minutes the Cumberland radio station had contacted Bolling Field and obtained the weather report, which stated that at that field there were scattered clouds at 3,500 feet, whereupon I decided to take off, climb above the clouds and fly for about 45 minutes out of sight of the ground and then come down through them.

After having flown the allotted period of time, no openings were seen through the clouds as expected. Believing, however, that the ceiling still existed, I decided to glide down through and find Bolling Field or at least the City of Washington beneath me. Accordingly, the P-1 was set in a steady descent of about 100 miles per hour, and I went into the clouds at about 8,000 feet. I watched the altimeter drop gradually from 8,000 to around 2,500 feet, but I was still in the clouds.

Expecting to come out at almost any instant, I continued my glide until it was too late to make use of my parachute. Then, when my altimeter registered a negative reading, a dark spot appeared, and I came out in a little valley, about 150 feet from the ground, with the adjacent hills still in the clouds. I jerked the gun back and continued my glide straight ahead, landing on a long, narrow strip on the side of a hill and the plane coming to the end of its roll just as a haystack loomed up in front of me.

I had no idea as to where I was, and only hoped I was somewhere near Washington. Finally, a farmer appeared and told me I was near Indian Head, on the Rapidan River, which was entirely off my map. Upon asking for a map, I was informed that the nearest one to be had was in an atlas owned by a man living across the river. Inquiring as to how to get across the river, I was told that it would be necessary to ford it on horseback. I proceeded to borrow a horse and, upon inquiring as to the best place where the river could be forded, I was advised that if I permitted the horse to go his own way he would take me across, and this proved to be the case. The horse wandered

here and there on the trip across, never touching a spot above his ankles and avoiding pools on both sides from ten to twenty feet deep.

Upon arriving at the house where the map was available, and which was in a 1900 atlas, I found that Indian Head was sixty miles southwest of Washington, my destination.

I slept that night in the haystack alongside my airplane and took off the next morning for Bolling Field.

Apparently, at 8,000 feet there was a terrific wind from the northeast, of which I had no knowledge, and which had blown me sixty miles off my course in the 45 minutes I remained in the air.

Moral: Winds blow in different directions at different altitudes.

On another occasion I was on a long cross-country flight, involving "hops" of from 1100 to 1500 miles, in an airplane having six separate tanks. On one particular leg of the flight, due to weather conditions, the course was flown at altitudes varying from 1,000 to 10,000 feet, with corresponding variations in temperature.

I had used a portion of the gas from the main tank and then had switched to various smaller tanks. A few moments after I switched back to the main tank, the engine coughed and slowly died, whereupon I was forced to land, with resultant nosing over and washout of the airplane.

All gasoline that had been poured into the tanks had been strained through two pieces of chamois. I was, therefore, positive that no water had been poured into the tanks. However, an examination of the sumps of the tanks revealed considerable water. The logical conclusion is that the water formed from condensation in the tanks during flight.

Moral: If on a long flight, do not use a portion of gas out of any one tank, but use all of the gasoline out of each tank.

---oOo---

INSPECTING LANDING FIELDS IN PHILIPPINES

Three groups of pilots from Clark Field, P.I., during this quarter, made visits to the Southern Islands, inspecting landing fields in Zamboanga, Del Monte, Camp Keithley, Tacloban and Iloilo.

Despite the heavy rains, the 3rd Pursuit Squadron has been able to complete over one-third of the Training Directive during the past quarter.

---oOo---

During the month of October, the Engineering Department of the San Antonio Air Depot, Duncan Field, Texas, overhauled 26 airplanes and 62 engines and repaired 20 airplanes and 15 engines.

THE FIRST GORDON-BENNETT BALLOON CUP RACE

By Colonel Frank P. Lahm, Air Corps



OWARD the end of the year 1905, James Gordon-Bennett, the well known proprietor of the New York HERALD, and one of the earliest and most generous donors of prizes for the encouragement of aerial sport, presented to the Aero Club of

France, through the intermediary of Count Henri de la Valuz, President of the International Aeronautic Federation, a cup valued at 2500 francs (at that time five hundred dollars). It was offered for competition in long distance free balloon contests under the rules of the International Federation. With the donation of the "Gordon-Bennett Cup" there was a condition that the Club of the pilot winning it agreed to organize a meeting and put the Trophy in competition the following year.

The first Gordon-Bennett balloon contest was organized by the Aero Club of France, and took place on September 30, 1906. The start was made from the Tuileries Gardens in the very heart of Paris. The rules of the competition allowed three balloons to be entered for each country affiliated with the International Federation, which had recently been formed and was just beginning to function. When the day arrived there were in all sixteen balloons entered, selected to represent seven clubs of leading countries of the world.

According to the regulations of the Federation, there are eight categories of spherical balloons, beginning with No. 1, holding 21,000 cubic feet of gas, up to No. 8, with a capacity of 144,000 cubic feet. For the Gordon-Bennett contest, the maximum size admitted was No. 5, about 80,000 cubic feet. The showing was especially gratifying and promising in view of the fact that ballooning as a sport was comparatively new.

Among the pilots entered were the leading aeronauts of the world, for the first time competing in an international contest. The countries represented were France, the United States, England, Belgium, Germany, Italy and Spain. One of the pilots was Santos Dumont, the well known Brazilian, but, although a contestant, he could not enter the competition for his native land, because Brazil at that time had no Aero Club and consequently was not affiliated with the Federation. The rules of the Federation allow an aeronaut of a nation not affiliated to qualify for a country whose quota of three entries is not full. Under this rule, Santos Dumont, who at the time was much in the public eye through the experiments he was making with his little di-

rigible or cigar-shaped balloon, entered for the Aero Club of America. Mr. F.S. Lahm was then the only citizen of the United States in France holding a pilot's license of the International Federation, and consequently the only aeronaut of our country eligible and available to enter the race. Previous to Mr. Santos Dumont's engagement, in order that this important contest should not take place without the flag of our country appearing at the start among those of other nations, he decided to enter as a competitor, although his sixtieth birthday had just gone by. Thus, there were two balloons of the United States engaged for the race.

In the summer of 1906 it happened that Mr. Lahm's son, Lieutenant Lahm, then a young officer of the American Army, in accordance with a custom of our War Department, was ordered to France for a course of one year at the French Cavalry School at Saumur. He had been initiated into the balloon game by his father in Paris in the summer of 1904, returned in the summer of 1905, and completed the requirements for a balloon pilot's license, which was issued to him by the French Aero Club that fall. Major James C. McCoy, one of the founders of the Aero Club of America and an officer of the Air Corps during the World War, arrived in Paris in the summer of 1906, became an enthusiast, and he and Lieut. Lahm devoted most of the summer to ballooning, at the end of which Major McCoy received his pilot's license.

Mr. Lahm then withdrew in favor of his son as a contestant in the Gordon-Bennett Race. Eleven of the sixteen competitors had ordered balloons of 80,000 cubic feet capacity built for the occasion. It was then too late to have one made for the American pilot, and there were none of sufficient capacity to be purchased, so the only alternative was to look about for a second-hand balloon, and one was found without difficulty, but it was of ten percent less lifting power than any of the others entered. Persons familiar with aerial contests realize that this is a great handicap. The larger the balloon, the more gas it holds and the greater quantity of sand ballast it carries, thus increasing the length of its life in the air and its chances for winning in a long distance competition.

There was the question of procuring a capable assistant, each aeronaut being allowed an aid, preferably one of his own country, although this is not obligatory. As there were no Americans in Europe experienced in this particular sport, Lieut. Lahm was forced to fall back on any foreigner who would be willing to go with him. Charles Levée, a

V-6909, A.C.

capable young French aeronaut, a friend of Lieut. Lahm's, who had made many balloon flights, including two from West Point, agreed to act as aid, but when his decision became known at the Aero Club of France there was much criticism of his action, and many arguments were offered to convince him that helping a foreigner compete against his own countrymen was an unpatriotic and not a laudable thing to do. Levée nevertheless held good, giving assurance each day that he could be depended on to go as he had agreed.

Several days before the contest, Major Henry B. Hersey, the well-known American Weather Bureau official, a former Rough Rider of '98, who rendered important service while in command of the Army Balloon School at Omaha during the War, and who had gone to Spitzbergen two years in succession with Walter Wellman in his attempts to reach the North Pole by airship, came to see Mr. Lahm on his arrival from the north. He wanted to know if it would be possible to go as aid to the Army officer. He was informed that all arrangements were complete and it was too late to change, but Mr. Lahm said: "Major, if on the day of the race you will be at the start, there is a possibility that you may go." That was exactly what happened.

An hour before the start of the race, Mr. Levée informed Lieut. Lahm that, owing to pressure put on him, he had changed his mind and would be unable to act as his aid. Major Hersey asked only time enough to go to his hotel for his overcoat and was then ready to go.

Handicapped by a smaller balloon, besides the fact that it was not new, undoubtedly the victory of these two comparative novices in the sport may be attributed to the American energy of the pilot, the meteorological experience of his aid, and the determination of both to win - the same qualities by which we have carried off the Gordon-Bennett Trophy many times since.

The beautiful afternoon of September 30th, 1906, was drawing toward sunset, and the sixteen great balloons were ready for the exciting take-off. Their rounded forms, gilded by the setting sun, swayed gently back and forth in the light breeze with a movement similar to that of captive elephants, at the very spot around the fountain of the Tuileries Gardens from which two French aeronauts, Charles and Robert, left the ground 140 years before, on one of the earliest balloon ascensions ever made, and the first where, instead of heated air, gas was used to inflate. It was estimated that there were two hundred thousand people in the Gardens and the Place de la Concorde to see the take-off.

The evening before the race, the competitors were entertained at a banquet presided over by Prince Roland Bonaparte,

then President of the International Federation.

On leaving the Tuileries at 4:55 p.m., the American balloon headed south of west, then west and finally, on reaching the English Channel at 11:17 that night, the direction was north-west, which would have carried it toward Lands End. Over the water it changed to north, and the crossing was made under a full moon, the balloon in good equilibrium with little for the occupants to do but throw a little ballast when the guide rope touched the water, eat the supper they had brought with them, watch an occasional boat slip by, and finally look for signs of the English coast.

The pilot made some water anchors out of empty sand bags and hoops brought along for the purpose, to be used in case of heading out toward the Atlantic. A revolving light appeared at 2:30 a.m., which proved to be on a lightship, and at 3:30 a.m., the English shore was crossed with the lights of Chichester showing a couple of miles to the west. Soon the fog came up and the ground was hidden for several hours. At one time the sound of water, quite like the lapping of the waves on the Channel, produced quite a thrill and gave the impression that the balloon had left the shore and was out over the North Sea, but it was evidently only a little water fall. Along toward 7:00 a.m., the clouds began to break and the ground appear. The first task was to find out the balloon's location, but English farmers sleep late Sunday mornings.

The first inquiries as to the name of the country brought only one reply: "Where are you going?" Finally the answer came back: "Hants." After further shouting in unison, the name of the nearest town was heard. Then it was a simple matter to find the balloon's location on the map and keep it from then on over Stratford-on-Avon, Warwick Castle, Nottingham and Yorkshire County.

All day long the balloon was held down by valving, as an increase in altitude invariably carried it eastward, which meant the North Sea and the end of the flight. At 2:00 p.m., with the prospect of the evening condensation coming on later, it was decided to ease down from 10,000 feet to a lower level, catch the south wind and make Scotland that night. All went well for a time until suddenly the North Sea loomed up straight ahead in the haze, and it was necessary to valve hard. But the inhospitable "moors" did not appear inviting, with no habitations in sight, so after hitting the ground, the balloon was kept in the air by dint of much valving and the loss of ballast in large quantities, until the ground wind from the south carried it back to civilization. Then a turn in the coast line made it necessary to land. The light anchor did not hold and, after the first

contact, a brisk wind caused the balloon to carry on far enough for the basket to hurdle a stone wall; then the rip strip put an end to its mad career.

A good English squire, owner of the estate, came up in some wonder and grasped the situation with difficulty. It was hard for him to understand that it was a balloon and that it had come from Paris, but after it was explained that this was a balloon race, he finally understood, signed the required landing certificate, provided enough English money to get the aeronauts to York (they had only French and German money), and did everything possible to assist.

After folding the balloon and getting

it started back to Paris by express, the aeronauts took the train for York and for a long night of much needed sleep.

Lieut. Lahm was awakened in the morning by violent pounding on his door. It was Major Hersey calling out that they had won, but Charles Rolls, one of the English team, was yet unaccounted for. On arriving at the Cecil Hotel in London late that afternoon, a bulletin gave the location of all the balloons. Nine had come down in France, a couple landing immediately on crossing the Channel, and the others all landed on the east coast but quite farther south than the winning balloon.

---oOo---

COMBAT FIRING BY THE 16TH PURSUIT GROUP

The 16th Pursuit Group, stationed at Albrook Field, Canal Zone, conducted on November 7th combat firing on ground targets at their gunnery range, located at Rio Hato, Republic de Panama. Major-General Harold B. Fiske, Commanding General of the Panama Canal Department, and Colonel F.H. Smith, Chief of Staff, were flown to Rio Hato to witness the exercises. Three targets, nine feet wide and twelve feet high, were placed on the range, with 100 yards interval between targets. The firing was done by three-ship elements, diving from 1,500 feet altitude and firing at approximately 1,000 foot range. Both guns were fired, and each element made six approaches, firing 150 rounds from each gun during the six approaches. All of the P-12E airplanes of the Group took part in the firing.

At the conclusion of the exercises, General Fiske expressed himself to Lieut.-Colonel Charles T. Phillips, Air Corps, the Group Commander, as highly pleased at the percentage of hits obtained. Colonel Phillips told the Department Commander that the percentage of hits was higher than that obtained on two similar exercises recently conducted by the Group, but that he had no comparative figures on results obtained in similar exercises by other organizations.

The Gunnery Range of the 16th Pursuit Group at Rio Hato, R. de P., is approximately seventy miles from Albrook Field. During the gunnery season, which lasts approximately six months, a range detail of twenty-two enlisted men is maintained there. The field, one of

the best natural landing fields in the Republic, is being constantly improved, and it is expected that within the next few weeks it will be sufficiently enlarged to permit landing by elements and flights.

For the combat exercises witnessed by the Department Commander, the Group did not land, on account of the time element, but commenced firing immediately after General Fisk's airplane had been parked on the 1,400 foot line.

---oOo---

LIFE-SAVING MEDAL PRESENTED CAPT. BANFILL

Elsewhere in this issue of the News Letter, mention is made of the award of a Life-Saving Medal to Captain Charles Y. Banfill, Air Corps, in recognition of his service in rescuing four boys from drowning on June 23, 1932, in Boston Harbor.

The circumstances surrounding this incident were as follows: On the date mentioned, Captain Banfill was enroute from Baltimore, Md., to Boston, Mass., on a routine cross-country flight. An unusually strong wind was blowing on that day. Crossing Dorchester Bay, at an altitude of about 3,000 feet, and heading for the Boston Airport, Captain Banfill noticed a peculiar object floating in the bay. Throttling down the engine, he made a spiral in order to examine this object more closely. As he did so, he saw something moving which looked like a boat. Getting down to within about 500 feet of the water, he saw what appeared to be a small sloop which, having capsized, was under water with the exception of about a foot of the hull, to which four persons were clinging. The water was extremely rough, and there was a 35-mile off shore breeze which was blowing the boat out to sea.

In order to attract the attention of persons on the water front with the hope.

Continued on Page 13



recent Engineering Section Memorandum Report issued by the Materiel Division under the title "Effects of Oxygen-Want (Anoxemia)" by Captain Harry G. Armstrong, Medical Corps,

discusses the deleterious physical and mental effects due to the want of oxygen in the human system, in altitude flying, and is of general interest as well as of very particular interest to all flying personnel.

"Oxygen-want," Dr. Armstrong informs us, begins for certain individuals at comparatively low altitude, becomes moderately severe at 12,000 to 15,000 feet, and severe at 18,000 to 24,000 feet. That the seriousness of this want of oxygen is not generally understood by Air Corps personnel is evidenced by the frequency with which individuals fly at altitudes from 15,000 to 24,000 feet without oxygen equipment merely to see how high they can go, and also by the fact that a squadron commander recently seriously considered conducting squadron close formation training at 20,000 feet without oxygen.

It is desirable to instruct flying personnel in the dangerous results of insufficient oxygen pressure and supply to the body. Dr. Armstrong points out that in laboratory tests pilots can go from 15,000 to 17,000 feet without apparently ill effects, and that at high altitude usually no ill effects are felt at the time. Investigation, however, has proved such effects to be anything but harmless.

To understand the cause of oxygen-want at high altitudes, Dr. Armstrong writes, is to understand the fundamentals of respiration.

The atmosphere contains at all altitudes approximately 21% oxygen. At sea level with a barometric pressure of 760 mm. Hg. the oxygen exerts a partial pressure of 21% of 760, or 159 mm. Hg. It has been shown experimentally that it is the partial pressure of oxygen in the lungs and not the percentage that diffuses it through the alveolar walls and into the blood so that as the barometric pressure of the atmosphere is decreased at altitude likewise the oxygen partial pressure is decreased and the blood takes up less and less oxygen. Finally, a point is reached at which the cells of the body do not get enough oxygen and they begin to lose their ability to perform their functions. As the altitude increases, the body cells finally become damaged and unable to function at all. Unless this condition is corrected, the cells, and consequently the organism, dies.

Unfortunately, the body makes little or no attempt to compensate for oxygen-want. This is due to the fact that the carbon dioxide accumulation in the body and not the lack of oxygen is the factor which determines to a great extent the breathing rate. Thus, at 15,000 feet, where one would expect great panting from oxygen-want, only slightly increased breathing is found, since the carbon dioxide accumulation within the body is approximately the same.

It has been found that in a person acclimatized to sea level conditions an ascent to at least 4,000 or 5,000 feet is necessary before oxygen-want begins to develop. Unfortunately, the first and principal effect is an anesthesia-like reaction in which the senses are dulled, and consequently the actual suffering of the body is masked so that the victim is wholly unaware of it. However, that the body is being damaged is well demonstrated by a stay at high altitude for from 12 to 24 hours, following which an attack of mountain sickness develops that one is not likely to soon forget. The symptoms of mountain sickness consist principally of nausea, vomiting, headache, diarrhea, muscular weakness and great general depression and prostration. This may last for only two days, but has been known to exist for as long as four weeks, which is ample proof of the damage to the body cells.

As altitudes above 12,000 feet are reached, the symptoms of oxygen-want appear more quickly and are due principally to the effects on the nervous system, as at lower altitudes, the anesthesia-like effect dominates the picture and the victim is in most instances blithely ignorant of his precarious condition, although it is easily demonstrated that he is becoming more and more incapacitated as the ascent continues.

While different individuals react differently at different altitudes, it may be said that, as ascents above 12,000 to 15,000 feet are made, the average effects are as follows:

At first there is a loss of the sense of feeling and pain which, to a great extent, probably explains the absence of physical distress. At about the same time vision becomes much less acute; at altitudes around 18,000 feet the first effects on the higher mental centers become definitely established and are characterized by loss of insight and judgment, dulling of the intellect, loss of emotional stability, the development of fixed irrational ideas, the loss of muscular control and a temporary loss of memory. This becomes progressively worse with the time spent at that altitude and also as the altitude increases.

By the time 22,000 to 24,000 feet is reached there may be fits of laughing or crying, impatience, rage or other emotional disturbances, and there may be great muscular weakness or paralysis. Usually vision at this altitude is approaching zero and the hearing is affected. The muscular incoordination or paralysis usually affects the muscles of the eyes so that depth perception is lost and diplopia or double vision may occur.

There is usually a state of stupor or sleepiness with a restricted field of attention, followed by a period of exhilaration closely resembling alcoholic intoxication during which a feeling of unusual well being and high efficiency is felt although the victim is approaching unconsciousness.

At higher altitudes the system is usually overcome and unconsciousness intervenes, and if not relieved has been known to cause mania, idiocy, brain hemorrhage, paralysis, blindness, permanent loss of memory, nerve tissue destruction, dilation of the heart and is frequently followed by pneumonia.

Not only, the report goes on to state, are those physical qualities, including visual acuity, eye muscle balance, depth perception, attentiveness, good judgment, keen intellect, alertness, and emotional stability so necessary for safe flying, impaired or temporarily in abeyance, but the effects are not fully relieved on returning to lower altitudes, so no doubt many a landing accident has been the result of such conditions. Two instances are cited to illustrate these contentions.

Recently during an altitude flight a member of a squadron lost his oxygen tube and continuing the flight ran amuck among the other airplanes of the formation and escaped a crash only by the ability of the other members of the squadron to out-maneuver him. During this time he was totally unaware of his actions and believed he was doing a masterful job of flying.

The second example has to do with a flight in which a pilot and passenger attempted to see how high they could go without oxygen. At about 20,000 feet the passenger noticed that the pilot had a very red sunburned neck which, as the climb continued, became very annoying to him. The sight of the red neck finally became so obnoxious to the passenger that he began to search about for a fire extinguisher or other weapon with which to kill the pilot (fixed irrational idea) and get the offending neck out of sight. Fortunately, no weapon was available and the pilot escaped probable death, although he flew at the airplane's ceiling, squashing along for over half an hour before he realized that they were unable to climb higher.

LIFE-SAVING MEDAL (Cont'd from p. 11)
of arousing such curiosity as to cause investigation to be made and rescuing parties to proceed to the spot where the imperiled youths were hanging on for their lives, Captain Banfill commenced performing antics in the air which certainly must have convinced spectators of one of two things - that here was a case of a good pilot going wrong or else that something unusual was happening on the Bay. He started a series of dives and zooms over the Bay, gave frequent bursts of the engine and, as he put it, made a big racket. He continued this for fully twenty minutes, during the course of which his main gasoline tank ran dry, leaving him with but 35 minutes more in the air with the fuel in the emergency tank.

It was with a feeling of great relief that Captain Banfill finally spied a launch putting out from the Coast Guard Station at South Boston. He then proceeded to make a succession of circles over the spot where the capsized boat was floating, thus acting as a guiding mark for the rescuing party.

The Coast Guardsmen stated afterwards that but for the aid which the circling airplane furnished, it would have been extremely difficult, if not impossible, for them to have located the upturned boat.

Captain Banfill, at present a student at the Command and General Staff School at Fort Leavenworth, Kansas, was presented the Life-Saving Medal recently by Brigadier-General H. J. Brees, Commandant of the School.

---oOo---

NEW FLIGHT INSTRUMENT

An Engineering Section, Materiel Division, Memorandum Report announces the completion of a study of the suitability of a flight instrument comprising, in one unit, improved indication of turn, bank, and climb, and stating that procurement of two experimental articles is being initiated.

---oOo---

ANNIVERSARY DAY CELEBRATED

The 12th Observation Group, Brooks Field, Texas, observed the fourth anniversary of its organization on November 2nd. A general holiday was declared and an extensive schedule of entertainment provided, consisting of the customary track meet - the main event - sack races, pie eating contests, three-legged races, and the usual other events with which military personnel make merry on such occasions. Each organization comprising the Group held "open house" at noon, entertaining the families of personnel at lunch. A downpour of rain interrupted the baseball game in the afternoon between the officers and enlisted men.

B I O G R A P H I E S

LIEUT.-COLONEL JOHN D. REARDAN, AIR CORPS

Dating his association with the Air Corps since the World War, Lieut.-Colonel Reardan's first duty assignment with the air branch of the Army was with the Spruce Production Division, becoming a member of the official family which administered the gigantic project of providing the necessary amount of spruce for the aircraft building program undertaken by the United States under the stress of the war emergency. On January 15, 1918, at that time a Captain of Infantry, Col. Reardan was appointed a Major (temporary) in the Signal Corps, and from that time until July 12, 1918, he commanded the Second Provisional Regiment at Vancouver Barracks, Wash., being commended by the Director of Air Service for his executive ability in bringing this organization to a marked degree of efficiency. From July, 1918, to February, 1919, he was stationed at Newport, Oregon, commanding the Yaquina District of the Spruce Production Corporation. On March 5, 1919, reporting for duty in the Office of the Director of Air Service in Washington, he was assigned as Chief of the Inspection and Purchase Sections of the Procurement Division, and he served in this dual capacity until July 15, 1919. Thereafter he served as Chief of the Purchase Section until the end of April, 1921. For several months towards the end of the year 1920, he occupied the positions of Acting Chief of the Procurement and Inspection Divisions. In addition to performing these functions, Col. Reardan served as a member of several Boards of Officers, one of them convened for the purpose of reorganizing the Office of the Director of Air Service, another to prepare regulations to assist Chiefs of Groups to carry out their functions. He was an Air Service representative on the War Department Technical Committee and Liaison Officer between the Purchase, Storage and Traffic Division of the General Staff and the Air Service in handling technical questions.

Col. Reardan was born June 3, 1885, in Salt Creek Township, Wayne County, Ohio. He enlisted in the Army in October, 1904, and served with the 85th Company, Coast Artillery Corps, as Private, Corporal and Sergeant until his appointment as a second lieutenant of Infantry, Regular Army, on January 24, 1908. He was promoted 1st Lieutenant on February 14, 1914; Captain, February 1, 1917; Major, July 1, 1920, and Lieut.-Colonel, August 1, 1931.

He began his flying activities in May, 1921, as a student at the U.S. Balloon School at Ross Field, Arcadia, Calif., and, upon the completion of his course of instruction, August 26, 1921, he was

rated a "Balloon Observer."

From September 20, 1921, to January 15, 1922, he commanded the U.S. Balloon School at Fort Omaha, Nebraska. He was then transferred to Langley Field, Va., where he took up further lighter-than-air training at the Airship School, completing the course on June 22, 1922, and receiving the rating of "Airship Pilot." Seven years later, upon completing the course at the Air Corps Tactical School at Langley Field, Va., he received another rating, that of "Airplane Observer."

After completing the one-year course at the Command and General Staff School at Fort Leavenworth, Kansas, Colonel Reardan returned to Washington for duty in the Office of the Chief of Air Service, and for two years, from August, 1923, he occupied the position of Chief of the Procurement Section, Supply Group and, in addition, performed the functions of Contracting Officer for the Air Service and served as a member of the War Department Board on Contracts and Adjustment and the War Department Board for the standardization of war contracts.

A student at the Army War College, Washington, D.C., beginning in September, 1925, he was, upon graduating from this institution, assigned as Chief of the Air Section, War Plans Division, War Department General Staff. While on this duty he served as a member of the Joint Army and Navy Planning Committee, and was attached to the 19th Airship Company at Langley Field, Va., for flying activities.

His graduation from the one-year course at the Air Corps Tactical School at Langley Field in June, 1929, was followed by his assignment to duty at Wright Field, Dayton, Ohio, as Commanding Officer. During his two-year tenure of this position, he also served as Chief of the Administration Section, Materiel Division.

Completing the one-year course at the Naval War College at Newport, R.I., in June, 1932, he began another tour of duty with the War Department General Staff, being assigned to the War Plans Division. During the month of May, 1933, he acted as official observer at the Command and Staff Exercises of the Air Corps, which were conducted at March Field, Calif.

Upon his relief from duty with the War Department General Staff, in September, 1934, Col. Reardan was assigned to duty in the Plans Division, Office of the Chief of the Air Corps, where he remained until December 26, 1934, when he entered upon his present duties as Chief of the Information Division. So far as serving on Boards is concerned, he is far from a forgotten man, for at present he is the senior member of the War Department Special Committee on Air Bases.

LIEUT.-COLONEL ARNOLD N. KROGSTAD

Lieut.-Colonel Arnold N. Krogstad, Chief of the Personnel Division, Office of the Chief of the Air Corps, was born at Lanesboro, Minn., August 28, 1885.

Graduating from the United States Military Academy on June 11, 1909, he was commissioned a second lieutenant of Infantry, and assigned to the 22nd Infantry. He received his promotion to 1st Lieutenant on July 1, 1916; to Captain, May 15, 1917, and held the temporary rank of Major in the Aviation Section, Signal Corps, from June 13, 1918, to January 10, 1919. He was permanently commissioned a Major in the Air Service on July 1, 1920, and received his promotion to Lieutenant-Colonel on June 1, 1934.

Col. Krogstad's detail to the Aviation Section, Signal Corps, followed his 7½ years of service with Infantry. He received his flying training at the Signal Corps Aviation School at San Diego, Calif., and he received the rating of Junior Military Aviator June 15, 1917.

In the World War, his first assignment to duty in the Aviation Section of the Signal Corps was at Berkeley, Calif., where he organized and commanded the School of Military Aeronautics, University of California. From October 8 to November 10, 1917, he commanded the Provisional Battalion, comprising the 8th, 9th, 40th, 41st and 87th Aero Squadrons, at Selfridge Field, Mich. He next organized the Flying School at Rich Field, Waco, Texas, and was in command thereof until April 2, 1918, when he was transferred to duty in the Office of the Chief Signal Officer in Washington, and assigned to the Training Section. He remained on this assignment only five weeks, when he was ordered overseas for temporary duty as liaison officer in connection with the coordination of training activities and the collection of technical data. During the course of his service in France he flew over the front lines in the Nieuport type plane.

Returning to Washington in August, 1928, Col. Krogstad was again assigned to the Training Section, performing additional duty as President of a Board of Officers to select hydroplane and balloon coast defense sites. From November 5 to December 12, 1918, he was on duty in the Operations Section, Division of Military Aeronautics, following which he was transferred to Eberts Field, Loanoke, Ark., as commanding officer. Upon the abandonment of that field in the latter part of 1929, he was assigned as Commanding Officer of the Aviation General Supply Depot at Morrison, Va., where he served from December 31, 1919, to September 15, 1921.

Transferred to the Headquarters of the 2nd Corps Area at Governors Island,

New York, Col. Krogstad was on duty as Air Officer until June 18, 1923, when, being due for foreign service, he was transferred to the Hawaiian Department, where he also performed the duties of Air Officer, September 3, 1923, to October 25, 1924. In April, 1924, he assumed command of Luke Field and continued in this capacity until January, 1926, when he was transferred to Langley Field, Va.

At this post at various times he performed such duty as Wing Operations Officer, Information Officer, Airways Officer, Commanding Officer of the 2nd Bombardment Group and Commanding Officer of the post. He pursued the one-year course at the Air Corps Tactical School, and graduated in June, 1928. For a period of nearly three years thereafter he again was stationed at Governors Island, N.Y., as Air Officer of the 2nd Corps Area, following which he was assigned to his present duty as Chief of the Personnel Division, Office of the Chief of the Air Corps.

During the months of May and June, 1933, he participated in the Air Corps Command and Staff Exercises at March Field, Calif., and Seattle, Wash., serving as Assistant Chief of Staff, G-1, on the staff of Brigadier-General Oscar Westover, who was in command of these exercises.

In the operation of the Air Mail Service by the Air Corps during the early part of 1934, Col. Krogstad performed the duty of Chief of Personnel, G-1.

---oOo---

PRAISE FOR AIR CORPS PHOTOGRAPHIC WORK

In a letter to the Secretary of War, under date of November 12, 1935, the Hon. Daniel C. Roper, Secretary of Commerce, stated:

"Reports from field parties of the Coast and Geodetic Survey state that the aerial photographs in North Carolina taken by Lieut. A. Y. Smith and Sergeant H.L. Hachwith, and in Florida by Lieut. J.G. Pratt and Sergeant G.H. Fisher, are remarkably uniform in scale and of excellent photographic quality. Such photographs demonstrate thorough knowledge of many factors, the neglect of any one of which would vitiate the work as well as high skill on the part of personnel executing it. The uniform excellence of the photographs also demonstrates the efficiency of the 2nd and 4th Photo Sections of the Air Corps who accomplished the laboratory work.

The compilation of maps is greatly expedited by such aerial photographs. The Coast and Geodetic Survey is accordingly grateful for the care and skill with which they were made.

It would be appreciated if you will convey my thanks to the personnel of the Air Corps concerned for their efficient cooperation with this Department."

---oOo---

Richards Field, Kansas City, Mo., is still seeking a spare hangar.

The following is an extract translation of an article entitled "Colonial Aviation," by Major Vincenzo Biani appearing in the September issue of the Italian aeronautical publication "Rivista Aeronautica":

"In the various regions of Africa, the terrain is of widely differing nature. In the Sahara it is arid, without vegetation, and inhabited only near oases, which are located at very great distances from each other. As a rule the Sahara is of limited elevation, sandy or rocky, and open to observation and fire; it never rains and no clouds are to be found. In other zones, particularly in tropical and equatorial regions, mountainous formations, with altitudes attaining 4000 meters, are encountered. The mountains are covered with woods or bushes, and the valleys are inhabited by tribes living by agriculture and sheep raising. They are habitually nomad. In these regions rainfall is abundant, but limited to certain periods of the year - the rainy seasons - during which every communication is interrupted. Cloud formations are frequent, even for long periods of time.

The above shows that there are two typical regions, entirely different from each other which, however, from an aeronautical point of view, have in common a scarcity of inhabitants in comparison to the ground area, the enormous distances between the inhabited centres, and the very limited density of objectives against aerial attacks, due to the fact that the population lives in the open or in huts which may be easily abandoned.

Flight invariably presents considerable difficulty of orientation and often finds unfavorable weather conditions, both on account of high temperature and strong winds. As a rule, it must be limited to day time.

Tactical reconnaissance is relatively easy, as it may be carried out at very low altitudes without too much risk. Strategic reconnaissance, on the contrary, is very difficult on account of the various directions from which the enemy may advance, and of the enemy's ability to conceal his intentions. Practically, there is no difference between armed forces and civil population, often the troops are mixed with the civilians and march together followed by caravans and animals, so as to look like peaceful shepherds.

Bombardment must be carried out from a low altitude, and can be successful only if a large number of small bombs are employed.

Good results can be secured with machinegunning on account of the terror of the natives when planes fly very low, and the number of casualties which may

be caused by trained and bold pilots.

During a combat between friendly and enemy ground troops, machinegunning from aircraft causes a double moral effect; depressive upon the enemy, encouraging upon friendly troops. In Libya, entire caravans and large camps were thus dispersed, against which little effect could have been secured with aerial bombs, due to the fact that the troops ran away and dispersed as soon as the airplane was heard.

It cannot be objected that this form of fighting is inhuman: soldiers never believed in an humanitarian warfare, which is only a fallacious and dangerous utopia of idealists and theorists living outside of reality, particularly today when war endangers not only a dynasty or the glory of a general, but the wealth, life, the future of an entire nation. It is impossible to think of a gentle war, in any case or against any enemy. Even less when it is the case of taming the pride of barbarian populations which menace the interests and the prestige of a great nation, which has before her and before history the high mission of defending and imposing her own mission of civilization.

Civilization is a wealth which can be propagated only through hard imposition, if those who must accept it are not ripe enough to receive it spontaneously and make it their rule for internal improvement.

The African people have a very simple and primitive conception of authority. They obey those who possess strength and know how to use it. They are more inclined to accept an abuse of violence than an act of weakness.

Hence, it is indispensable to give them the precise sensation that we are stronger than they, that we have better, more numerous and more deadly arms than themselves.

In evaluating the value of the life of noncombatant people, another factor, principally moral, must be taken into account. We cannot accept the evangelic principle that all men are creatures made to the similarity of God and equally dear to His heart. Should we admit that some indigens of barbaric costumes and habits must be considered at the same level and deserving the same respect as the Europeans, we would implicitly deny the evolution of centuries, which has created an abyss between the different races of mankind, different from each other and separated, in spite of the fact that, according to the biblical law, they all come from the same origin.

Aviation consequently must be employed on a large scale, and must be entrusted with all those tasks which may terrorize the enemy, so as to defeat promptly any intention of resistance on

their part. It is well to remember at this juncture that primitive and semi-barbarian people are easily gained by enthusiasm and also by discouragement. They exaggerate every sign or fortune or misfortune and can be extremely optimistic as well as desperately discouraged. They lack the strong conscience and internal discipline which is the source of the moral strength of the civilized man, who sometimes, from a momentary reverse derives the energy, the will and the courage to react and win.

This psychological inferiority of the primitive populations must be taken into account and must be exploited by the aerial arm in order to create a favorable atmosphere for the ground troops' advance. These will find a much easier task if the country has been disorganized and frightened by a preceding, vast aerial operation, which will be then continued together with the ground operations, and will finally be transformed into a police and control organization over the occupied territories. Three phases of employment of aviation may consequently be foreseen in a colonial campaign:

1. A preliminary phase carried out by aviation only, with reconnaissance, destructive and disorganizing tasks, strategical reconnaissance and attack of all enemy objectives.
2. A phase of air-ground cooperation in support of the operating troops, including: tactical reconnaissance, liaison, bombardment, machinegunning, logistic services.
3. A phase of occupation of the gained ground, including the aeronautical organization of the occupied zones (in order not to weaken the ground forces with the organization of too many garrisons), the survey of roads of communication between the troops and the rear bases, the watching of native populations, the repression of all attempts at insurrection.

It is evident that the tasks are various and of great magnitude, and require excellent planes, well trained personnel, a perfect organization of fields and fuel servicing, and a clever commander, active and full of initiative."

---oOo---

PHILIPPINE TYPHOONS

By Lieut. W. E. Steele, Air Corps

The Philippine Islands are having the usual "unusual" typhoon and rainy season. The rainy season started unusually late, being well on into July before storms of any consequence arrived. Since that date, however, the Island of Luzon has been visited by a series of typhoons and accompanying rains, causing heavy floods, property damage, and loss of lives. It all started in July,

when it seemed three separate typhoons got into an argument as to which one was to be the first typhoon of the season, and as a result Northern and Central Luzon experienced one of the heaviest rains in the history of the Islands. The duration of the three overlapping typhoons was from July 18th to August 6th, during which time the rainfall at Baguio was 120 inches and at Manila 35 inches.

During three days in August, the 2nd, 3rd and 4th, the rainfall at Baguio was 65 inches, the heaviest hourly rainfall being 3.2 inches. The resulting floods caused much property damage and the loss of several lives. The flat country in the vicinity of Mt. Arayat, from Calumpit to Vilaiis, was flooded with several feet of water. Many barrios were completely inundated. Railroad and highway traffic was completely paralyzed. The only mode of transportation on the streets of cities and to isolated barrios was by boncas or sampans.

Due to the sluggish drainage of the country, it was ten days before the water subsided sufficiently for normal traffic to be resumed. During this time Nichols Field maintained an air mail service to Clark Field.

Another typhoon visited us the first of October, and at the present time (October 15, 1935) the highways and railroads north of Manila are still under several feet of water.

The "new arrivals" are commencing to wonder if there is such a thing as a dry season.

---oOo---

AIR DEMONSTRATION FOR RELIEF FUNDS

An announcement from March Field, Calif., was to the effect that on November 30th an air demonstration was to be staged thereat, also athletic contests, a massed band concert, an exhibition of technical equipment, etc., for the benefit of the Army Relief Society, which devotes itself to the cause of destitute widows and orphans of officers, warrant officers and enlisted men. Spectators attending the show were to be charged the sum of 25c for stickers placed on their automobiles.

It was stated that the spectators would probably get their biggest thrills out of the air review of all the combat planes of the post, together with a great variety of other aerial maneuvers and demonstrations, such as figure eights and Lufbery circles.

All of the grounds, airplanes, technical equipment and other points of interest will be open to the public, with uniformed guides from the Air Corps on hand to answer the questions of the visitors. The tactical organizations staging the aerial demonstration will be the 17th Attack Group and the 19th Bombardment Group.



NEWS LETTER

ISSUED BY OFFICE OF THE CHIEF OF THE AIR CORPS
WAR DEPARTMENT WASHINGTON, D.C.

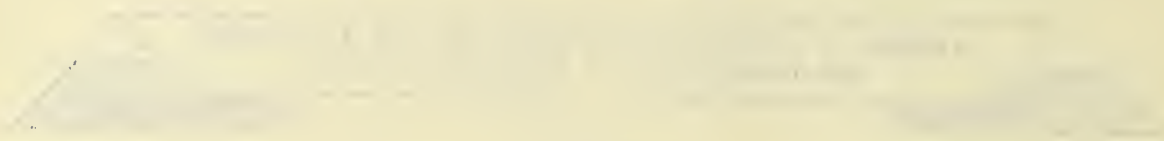


Major General
Benjamin D. Foulois
Chief of the Air Corps

2003

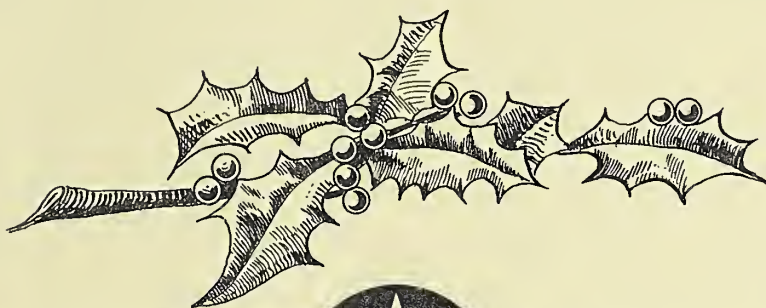


2003



Copyright © 2003
All rights reserved.

Greetings
— to all —
Air Corps Personnel



B. Z. Foulis

MAJOR GENERAL, AIR CORPS,
CHIEF OF THE AIR CORPS.

CONTENTS

1. Introduction

2. The first part of the book

3. The second part of the book

4. The third part of the book

5. The fourth part of the book

Information Division
Air Corps

December 15, 1935

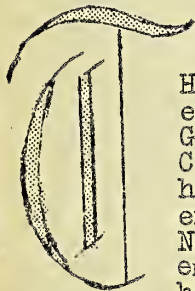
Munitions Building
Washington, D.C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

---000---

MAJOR GENERAL BENJAMIN D. FOULOIS

The interesting career of the Army's Pioneer Airman



HE War Department has announced the retirement of Major General Benjamin D. Foulois, Chief of the Air Corps, on his own application, to take effect December 31, 1935. The National Defense Act, as amended, extends to an officer holding the position of Chief

of a bureau or branch the privilege of retiring with the rank accorded to the chief of the bureau, providing he has served in that capacity for the full period of four years. General Foulois completes four years as Chief of the Air Corps on December 22, 1935.

The retirement of General Foulois brings to mind the long and interesting record of service achieved by this officer during 27 years of experience in Army aviation.

Few officers who are today on the active rolls of the Army have had a more colorful career than General Foulois, pioneer military aviator, who piloted the first Army airplane almost a quarter of a century ago and is still handling the control stick of military aircraft whenever he makes a flight, and that is quite often.

The Flying General is one of very few aviators alive today who can relate their experience in piloting the early airplane of 25 years ago, which was then looked upon with wonderment and awe but which is now the subject of considerable curiosity at the National Museum.

Much water has flowed over the dam during this span of 25 years, and the transformation aviation has undergone in this period of time is truly remarkable and causes one to speculate on what the future has in store for aviation.

General Foulois is one of a comparatively few officers in the Army today who rose to the high position of general officer from the ranks. Ever since he entered the Army he actively participated in every major and minor fracas in which the United States Army was involved, from the Spanish-American War and the Philippine Insurrection up to and including the World War.

At the age of 18, when he left his home in Washington, Conn., to carve out a career for himself, he set out for the big city - as seems even now the customary case in magazine and movie stories.

Having only a limited amount of cash in his possession, he denied himself the luxury of a train ride and pedalled his bicycle the entire distance of about 110 miles to the American Metropolis. His thoughts were bent on a career aboard a Man o'War, and reaching the water front he left his bicycle upon the dock, boarded the old Navy receiving ship VERMONT, and made his ambition known to the petty officer aboard.

"So, young fellow, you want to join the Navy, eh?" queried the hardboiled noncom.

"Er - yes," answered young Foulois.

"Ever served on a ship before? Know anything about a seaman's duties?"

"No, but I think I could learn the ropes pretty quickly."

"Well, son, I'm sorry we cannot use you. Right now we need experienced men. We haven't got time to train 'em and, besides, you're too light. We need husky men. Suppose you try your luck with some of the merchantmen."

And so, as young Benjamin Foulois dejectedly left the ship, his hopes of sailing on a gallant Man o'War had gone glimmering.

This transpired not long after the sinking of the Battleship MAINE in Havana Harbor, and talk was rife of a war with Spain. Young Foulois' efforts to find a berth in the Merchant Marine also proved to be in vain, and he began to take more interest in the posters in front of an Army Recruiting Station. The oftener these posters caught his eye the more they intrigued him, and finally he found himself climbing the stairway leading to an Army Recruiting Office. When he walked down these same stairs a short time later, one might well have imagined him whistling the familiar tune: "You're in the Army now." As a matter of fact, he was not only in the Army but in a war as well.

He was a Corporal of Company G, 1st U.S. Volunteer Engineers, from July 7, 1898, to January 25, 1899, and saw service in Porto Rico during the Spanish-American War, from August to November, 1898. He then enlisted in the 19th U.S. Infantry on June 17, 1899, and shortly thereafter again found himself sailing for a distant shore, this time to the Philippines. He served with Company G of this regiment as Private, Corporal, Q.M. Sergeant and 1st Sergeant until July 8, 1901. In the mean-

time, he had undergone an examination for a commission in the Regular Army and accepted appointment as a 2nd Lieutenant of Infantry on July 9, 1901.

Lieut. Foulois' first tour in the Philippines was from August, 1899, to June, 1902, during which period he actively participated in the campaigns against the Filipinos in the Islands of Luzon, Panay and Cebu, from August, 1899, to July, 1901, and against the Lake Lanao Moros in Mindanao during the months of April, May and June, 1902. He was one of four officers of the 17th Infantry who performed the major part of the mapping and exploring of the Rio Grande Country of Mindanao in 1901 and 1902. Other duties he performed during his service in the Philippines were those of Inspector of Customs, Collector of Internal Revenue and City Treasurer of Cottobato, Mindanao, from September, 1901, to June, 1902. He commanded Company D, 17th Infantry, from July, 1901 to August, 1902.

Returning to the United States with the 17th U.S. Infantry in August, 1902, and taking station at Vancouver Barracks, Washington, Lieut. Foulois' tenure of duty in this country was of short duration, for in July of the following year he was again aboard an Army transport bound for the Philippines. His second tour in the Islands was of two years' duration, most of which time he served in Mindanao and in the Sulu Archipelago in campaigns against the Lake Lanao Moros, the Rio Grande Valley Moros and the Jolo Moros, the fiercest and most warlike tribes in the Philippines. For two months he was on a special project mapping the Island of Basilan.

In the fall of 1905, Lieut. Foulois was back in the United States, having been assigned as student officer at the Army Service School at Fort Leavenworth, Kansas. He graduated in June, 1906, from the Army School of the Line, and was slated for duty as student officer for the 1906-1907 course at the Army Signal School, but trouble was brewing in the Island of Cuba and Uncle Sam, finding it necessary to act as mediator, dispatched to the little Republic his so-called Army of Cuban Pacification. Among the troops which sailed to the troubled island was the 17th Infantry, the regiment to which Lieut. Foulois was attached. So once more Lieut. Foulois trod the decks of an ocean-going vessel, but not as a sailor. At any rate, his ambition to sail the broad seas was in some measure fulfilled.

During his service in Cuba from October, 1906, to May, 1907, Lieut. Foulois was engaged in mapping work, and was in charge of the Ciego de Avila Section of the Progressive Military Map of Cuba, which involved the mapping of approximately 1800 square miles of territory.

In the course of this work he introduced several improved methods of mapping and was commended for the thoroughness and accuracy of the work performed.

In the fall of 1907, Lieut. Foulois returned to Fort Leavenworth to pursue the one-year course at the Army Signal School. He graduated the following June, and his graduating thesis was the first recorded military article to deal with the "Tactical and Strategical Value of Aero-dynamical Flying Machines". This thesis was probably the turning point in Lieut. Foulois' military career, for it marked the beginning of his long association with military aviation. Following his graduation from Fort Leavenworth, he was detailed in the Signal Corps in July, 1908, and ordered to Washington for aviation duty.

During his first year with the Signal Corps he operated the first dirigible balloon purchased by the United States government and personally redesigned the first dirigible tent hangar in use by the U.S. Army. He was one of the first three officers in the Army detailed to operate the first military airplane purchased by the government from the Wright Brothers in 1909. This Army plane was powered with a 4-cylinder, water-cooled engine, developing about 25 horse-power. The engine, located in the center of the lower wing, energized two 8½-ft. wooden propellers, to which it was connected by means of chains. The propellers turned at about 400 r.p.m. There were no landing wheels on the airplane, and it was launched in the air from a monorail.

July 30, 1909, was a memorable day in the career of General Foulois - his first ride in an airplane! It was a warm summer day which seemed propitious for flying. A crowd lined the parade ground at Fort Myer, waiting expectantly for the flight. The spectators were not disappointed. A chorus of "Ah's" went up as the Wright machine was shoved out on the field and placed on the monorail.

"There goes Orville Wright!" ejaculated several of the spectators in unison.

"Say, soldier," queried one individual, wearing a wide brimmed straw sailor so popular in those days, of one of the enlisted men detailed to keep the crowd back, "who's that officer with Mr. Wright?"

"That's Lieut. Foulois of the Signal Corps," replied the enlisted man.

"Is he going to fly with Mr. Wright?"

"Looks that way, chief."

Sure enough, as Orville Wright climbed into the machine, sat down and commenced testing the controls, Lieut. Foulois also climbed in and sat down

V-6923, A.C.

beside him. Pretty soon, Orville Wright signalled for the start. The detail of enlisted men shoved the plane down the monorail, and a few moments later the machine was in the air amidst the shouts of the crowd.

This was the final trial flight of the Wright machine at Fort Myer. Orville Wright, with Lieut. Foulois as observer, flew from there to Shuler Hill, Alexandria, Va., during the course of which three world's records were broken - speed, altitude and duration cross-country.

That year, Lieut. Foulois was detailed as America's delegate to the International Congress of Aeronautics, held in France in September and October. His career as a military aviator began in January, 1910, when he was ordered to proceed to San Antonio, Texas, in charge of the first airplane (No. 1) owned and used in the service of the U.S. Army. The two other officers originally detailed with him to operate this machine had been relieved, and he himself had had less than one hour's instruction in its operation. He was instructed to proceed to Texas and "teach himself to fly".

And so the scene of Lieut. Foulois' aviation activities was shifted to San Antonio, where the climate was considered pretty healthy for flying. It proved so then as it does down to this day, the only fly in the ointment being that Army airplane No. 1 was not a healthy aircraft specimen compared to modern-day types.

There at San Antonio was Army aviation in the making, with Lieut. Foulois as Commanding Officer of eight enlisted men - truly a humble beginning for a combat branch of the service which many present-day military students consider a nation's first line of defense. One day, as Lieut. Foulois was "teaching himself how to fly", something went wrong, as usual, and the plane came down in a crash.

"Good Lord! There it goes again!" ejaculated one of the enlisted men. "That sure seems a bad one! If the Looie isn't a goner this time it's a miracle!" All eight made a rush for the spot where the machine crashed. They pulled their Commanding Officer loose from the wreckage, fear tugging at their hearts. But their C.O. was far from being through, and his none too polite language concerning a certain airplane designated as "No. 1", relieved their tense feelings. It was found that a wire of the fuselage had ripped its way into Foulois' leg. But it wasn't such a bad mess after all, for the damage to his leg as well as to sundry parts of his airplane was

speedily mended.

That Foulois mastered the art of flying goes without saying, and flying an airplane in those days was vastly more difficult and hazardous. Because of its comparatively flimsy construction and the low output of its power-plant, it was at the mercy of any strong breeze which happened to spring up and, on the score of safety, it was necessary to confine flying operations to the periods before sunrise and after sunset, when atmospheric conditions were generally calm.

General Foulois is one of a handful of pioneer aviators who taught himself to fly, and in doing so he experienced considerable grief, not because of any injuries he received in landings, but because he was incessantly engaged in making repairs to this solitary airplane owned by the Army. From January, 1910, to March, 1911, he was the United States Army's lone pilot, navigator, instructor, observer and commander in the Heavier-than-Air Division.

The government had allotted the insignificant sum of \$150.00 for the maintenance and upkeep of Airplane No. 1. This sum did not last very long, and General Foulois dug into his own pocket to the extent of approximately \$300.00, in order to keep this machine in commission.

All in all, he designed at least twenty mechanical improvements in this airplane, all of which were later incorporated in subsequent models of airplanes used by the United States Army. He also conducted numerous tests to determine the suitability of various grades of steel wire and steel cable. The results of these tests were the foundation of the present aviation steel wire and cable industry in existence in the United States.

Not only is General Foulois a pioneer aviator, but also a pioneer in radio, for in 1911, when he was assigned to aviation duty with the Maneuver Division organized at San Antonio, Texas, he designed in the spring of that year the first airplane radio receiving set ever used in the United States on an airplane. At that particular time, while on air patrol duty on the Mexican border, he broke the world's cross-country record with a passenger, whom he flew along the Rio Grande from Laredo to Eagle Pass, Texas. While with the Maneuver Division at San Antonio, he carried out the first air reconnaissance problems ever conducted with troops of the United States Army.

Lieut. Foulois departed from the scene of his trials and tribulations with the first Army airplane in the fall of 1911 and came to the nation's capital on a brand new assignment - duty in the

V-6923, A.C.

Division of Militia Affairs in charge of all Signal Corps and Engineer units of the Organized Militia throughout the United States. During his period of service with the Militia Division he reorganized the Signal Corps Field Companies of the entire Organized Militia and reorganized many of the Engineer units. He did not, however, neglect his flying work, and in the spring of 1912 successfully carried out numerous tests with airplane radio receiving sets. A record in radio communication of 18 miles which he succeeded in reaching was the greatest distance that had heretofore been accomplished in aviation radio. In the summer of 1912 he was on aviation duty in the Connecticut Maneuvers, carrying out daily air reconnaissance missions with the troops engaged in these maneuvers. On the final day of this mimic warfare his last reconnaissance mission resulted in furnishing the Commanding General of the Red Forces with information which enabled him so to dispose of the troops as to win in the problem by preventing the opposing troops from attaining their objective.

The famous First Aero Squadron, the first complete military air unit established in the United States Army, was personally organized, equipped and trained by Lieut. Foulois. He also personally designed the first field tent hangar ever used in the U.S. Army. This same model field tent hangar was used by the First Aero Squadron in Mexico in 1916, and during the World War large numbers of them were used in the United States and in Europe for the temporary housing of airplanes. He planned and organized the First Aero Squadron with motor trucks in 1914, and it was the first combat unit of the Army to be equipped with motor vehicles exclusively. He also personally redesigned the semi-permanent wooden hangars built at the Signal Corps Aviation School at San Diego in that year.

In July, 1915, Foulois was ordered to Fort Sill, Oklahoma, in command of the First Aero Squadron for duty with the Field Artillery School of Fire. At this time he had attained the rank of Captain. At Fort Sill, he carried out artillery air observation with artillery troops, which marked the first effort made in the United States Army toward the combined use of artillery and aviation. He personally initiated and supervised the carrying out of many practical field tests of airplane motors with a view to their more efficient development. The result of these tests later saved the lives of many of the flying officers during their service with the First Aero Squadron in the Punitive Expedition into Mexico in 1916.

The movement of aviation units from one base to another under their own power found its inception in November, 1915, when the First Aero Squadron was ordered to proceed to San Antonio, Texas, for station. On Capt. Foulois' recommendation, all the airplanes were flown to San Antonio, while the enlisted personnel and other equipment were moved overland by truck. In the total distance of 550 miles covered by the squadron airplanes, five stops were made. Only one slight mishap occurred during this movement by air, a broken tail skid, which entailed an expenditure of fifty cents to repair.

From November, 1915, to March, 1916, Captain Foulois was in command of the First Aero Squadron at San Antonio, and also was on duty as Department Aeronautical Officer of the Southern Department. He was then ordered to proceed with the Squadron to Columbus, New Mexico, for duty with the Mexican Punitive Expedition, then being organized under General Pershing, for service in pursuit of Pancho Villa.

During the operation in Mexico, he was constantly called upon to perform numerous duties outside of those regularly required of the Squadron, and this organization virtually played the role of Jack of all Trades. Although greatly handicapped by inferior and old types of airplanes, the actual flying operations carried on by the Squadron under his command were such as to cause General Pershing to state that one airplane was worth to him more than a regiment of Cavalry.

When the Punitive Expedition had pushed deeper into Mexico, and the advanced troops had been out of communication for several days, Capt. Foulois was directed to fly to Chihuahua City, approximately 60 miles distant, to ascertain if the American Consul had any news or reports on the situation.

Upon arriving at the outskirts of the city, he proceeded cautiously to the American Consulate on foot. When he reached the Consulate, he learned from the Consul that the American troops had engaged the Mexicans at Paral; that the publication of all newspapers in Chihuahua City had been suspended; that great feeling existed in the City against all foreigners and that all of them had been warned to leave the city.

After remaining in hiding that afternoon and night, Captain Foulois flew back to General Pershing's headquarters the following morning, reported the first news to him of the fight at Paral and delivered his dispatches to General Pershing. The latter, thereupon, told Captain Foulois to hold himself in readiness to return to Chihuahua City

with his answer to Consul Letcher's dispatches.

Neither of the two airplanes were then available for service, being in need of repairs, and an automobile was used. Reaching the outskirts of Chihuahua City again, he entered the town on foot, delivered General Pershing's answer to the Consul, escaped from the city without difficulty and returned safely to Headquarters.

In September, 1916, when Captain Foulois was ordered back to San Antonio, he was again assigned to duty as Department Aeronautical Officer, Southern Department. While on this duty he established the present aviation station known as Kelly Field, and also outlined plans for the establishment of aviation stations along the border from Brownsville to the Pacific Coast.

Captain Foulois went back to Washington on duty in the Aviation Section, Signal Corps, in March, 1917, and upon the declaration of war against Germany was personally charged with drawing up the plans and organization of the Air Service for this great emergency. This plan was the basis of the \$640,000,000 appropriation by Congress to develop a new industry, to construct training stations, shops, warehouses, etc., to recruit, organize and train 120,000 officers and men, to supply advanced training in the field, and finally to make operations with the troops effective. The magnitude of the task was staggering. The declaration of war with Germany found the United States with an air force, if such it could be called, of 65 officers (35 of whom were fliers), 1,087 enlisted men and 55 airplanes. In the eight years from 1909 to 1916, American aircraft manufacturers had delivered to the Army a total of 142 planes, hence the problem confronting this country in the matter of aircraft production may be appreciated when the French government presented a program to America calling for 16,500 modern airplanes in the first six months of 1918.

During the period from April to October, 1917, Foulois, in addition to his other duties, which were numerous, acted as Chairman of the Joint Army and Navy Technical Aircraft Committee of the War and Navy Departments. October, 1917, found him again aboard an ocean-going vessel, this time bound for France. This time his shoulder straps bore a silver star, he having been appointed a Brigadier-General, Signal Corps, (temporary) on the 24th of July in that year. His mission overseas was to take charge of field work in locating and organizing training stations, depots, shops, warehouses and airdromes in France, England and Italy and the

training of all personnel in these allied countries. This stupendous task was well performed.

General Foulois' service during the World War may be summarized, briefly, as follows: He was Chief of Air Service, A.E.F., from November 27, 1917, to May 29, 1918; Chief of Air Service, 1st Army, A.E.F., May 29, 1918 to July 25, 1918; Assistant Chief of Air Service, A.E.F., July 26, 1918, to June 26, 1919. He was also chairman of the Joint Army and Navy Aircraft Committee in Paris, charged with supervision of purchases made in the United States; American member of the Inter-Allied Expert Committee on Aviation which was part of the Supreme War Council, from February 21, 1918, to June 26, 1919, and held other very important posts of an associated nature.

In recognition of his services on the Inter-Allied Councils, the French Government awarded him the grade of Commandeur of the Legion d'Honneur. He was also cited in April, 1919, by the Commander-in-Chief, A.E.F., for "Exceptionally Meritorious and Conspicuous Services with the Air Service, A.E.F." and was awarded the Distinguished Service Medal.

After a term of duty in Washington in connection with the demobilization of the Air Service and salvaging of the immense amount of property which had been accumulated, he was ordered to Germany for duty as Air Attache at the American Embassy at Berlin. Returning to America on the expiration of this detail in April, 1924, he was assigned to duty as student officer at the Command and General Staff School, Fort Leavenworth, graduating therefrom in June, 1925, and shortly thereafter being assigned to duty at Mitchel Field, L.I., New York, as Commanding Officer.

In December, 1927, he was appointed Assistant Chief of the Air Corps with the rank of Brigadier General, being promoted thereto from a Lieutenant-Colonelcy, and from then, until July, 1929, he was in charge of the Training and Operations Division of the Office of the Chief of the Air Corps in Washington. For the period of one year he was on duty as Chief of the Air Corps Materiel Division at Wright Field, Dayton, Ohio, after which he returned to Washington and organized the Plans Division of the Office of the Chief of the Air Corps.

In May, 1931, General Foulois commanded the gigantic Air Corps Exercises which, it will be recalled, consisted of the assembling from the whole country and leading in maneuvers throughout the eastern section of the United States of 672 military airplanes. These exercises represented the massing and handling under one command of the greatest number of military aircraft ever assembled in

the world, and were conducted from beginning to end without a single fatal accident.

At the beginning of these Maneuvers, when the noses of these 672 airplanes were pointed towards Dayton, Ohio, the rendezvous point, General Foulois, accompanied by his staff, headed westward from Washington to take command of the combined air force. As the seven planes approached the Alleghenies, weather conditions gradually grew worse and consequently made flying increasingly hazardous, as is often the case in that locality. Several of the pilots deemed it wise either to land as soon as practicable or return to Washington to await better weather conditions along this stretch. It finally transpired that all of them did an "about face" and headed eastward, save one - the Flying General. To use the airmen's expression, he "pushed through" the "soupy" weather and assumed command of the 1st Provisional Air Brigade at the appointed date and hour. For his leadership in these Maneuvers, General Foulois was awarded the Mackay Trophy for 1931, this award being made annually for the most meritorious flight in the Army Air Corps.

With the retirement on December 19, 1931, of Major-General James E. Fechet, General Foulois was elevated to the much coveted position of Chief of the Air Corps. During General Foulois' tenure of this position a great many important projects were either initiated or completed, or both. Some of the more important major projects completed during the past four years are as follows:

1. Completion of Randolph Field, Texas, and the removal thereto for operation of the Air Corps Training Center and the Primary Flying School.

2. The completion of the physical plant at Wright Field to accommodate the operations of the Materiel Division.

3. Completion of the permanent housing and technical building projects at Barksdale, Hamilton, Mitchel, Patterson, Langley, Selfridge, March and Maxwell Fields, and the partial completion of such projects at several other stations.

4. Development of a successful long-range, high speed Bombardment airplane.

5. The initiation of improved methods of property accountability in the Air Corps Depots and at the Materiel Division.

6. Marked improvement of aviation fuel, giving greatly increased efficiency.

7. Application of Prestone cooling to aviation engines.

8. The elimination of carburetor troubles and the improvement of power output by the use of the fuel injection system in airplane motors.

9. Organization of General Headquarters Air Force.

10. The initiation of special training of Air Corps pilots in air navigation and instrument flying.

A great many other accomplishments might be added to this list, if space permitted. The period of General Foulois' tenure of office may be summarized by the statement that at no prior period of equal length was progress in the Air Corps so rapid and accomplishment so great.

In recognition of General Foulois' numerous aviation accomplishments, the Council of the Institute of the Aeronautical Sciences, Inc., New York City, at a recent meeting, elected him an Honorary Member of the Institute, the following citation being part of the resolution enacting this election:

"For his courageous foresight in laying the foundation of military aviation; in recognition of great personal sacrifices made in pioneering a field which has become a major factor in the national defense of all countries; for advocacy of the premier position aircraft should occupy in commerce and military strategy; and for his leadership in utilizing the aeronautical sciences for the technical development of the flying equipment of the Army."

Thus far, General Foulois is only the second person to be thus honored by the Institute of Aeronautical Sciences. General Foulois is still an active pilot, who habitually pilots Army aircraft alone, over the entire country. For 26 years he has piloted military aircraft in peace and in war, the pilot of longest service as such in the United States Army, as well as in the entire world, as far as known. For that matter, few men piloted aircraft earlier than he and are still alive to pilot them today.

General Foulois enjoys the warm personal friendship of officers and enlisted men alike. His practical approach to all their problems and the careful consideration he personally gave to the many questions presented to him for solution made all feel that his every thought and effort was to secure their best interests. They experience a distinct loss in General Foulois' retirement from active duty.

ALPHABETICAL FORMATIONS IN THE AIR

By the Wheeler Field Correspondent

Though youngsters on the Island of Oahu - like any others - have to go to school to learn their "A, B, C's," they know their "D's" pretty well before they get there. This general precociousness in regard to "D's" may be laid at the doorstep of the 18th Pursuit Group which has kept "D's" of all shapes and sizes and various degrees of symmetry floating about the Hawaiian heavens, off and on, all year.

Large-eyed youngsters spied their first "D" floating over Honolulu Harbor on the 19th of March, and learned from their mamas that "D" stands for "Drum." Somewhere under the floating "D" General Drum was arriving on the U.S. Army Transport REPUBLIC to take command of the Hawaiian Department. They cried out again on September 26th, when a similar "D" appeared, hovering over almost the identical spot. This time mama was stumped, but the "D" stood for Duncan - Major Early E.W. Duncan, to be exact, who was outward bound on the REPUBLIC. It was flown by the Sixth Pursuit Squadron, of which he had been the Commanding Officer.

The inevitable and noisy "D" darkened the fair face of the Hawaiian heavens again on September 30th, this time accompanied by an equally noisy "G," roaring "Aloha" to Secretary of War George H. Dern, as the U.S.S. CHESTER was steaming up the harbor. Still accompanied by the "G," it reappeared on October 4th, but with an "H" sandwiched in between to forestall further speculation upon alternative meanings by certain profane minds. In this instance the occasion was the formal review of the entire Hawaiian Department by the Secretary of War. Hardly a week had passed before it put in another appearance, paired with an "M" as the entire 18th Pursuit Group prepared to welcome ex-Chief of Staff, General Douglas MacArthur, who paused in Hawaii en route to his new post in the Philippines. At this writing, still another "D" is in prospect as an Air Corps honor to Major General Halstead Dorey, the popular Commanding General of the Hawaiian Division and of Schofield Barracks, whose retirement will become effective about "D" (for December) 3, 1935.

"Flying" initials over incoming liners together with the dropping of leis of flowers from planes to their decks is the spectacular modern contribution of the 18th Pursuit Group to the age-old and glamorous Aloha traditions of Hawaii. And this year, though "D" may still stand for "Dog" and "Duck" to children in the States, it has meant "Aloha" to everyone over here.

---oOo---

SMOKY WORK BY THE 37TH ATTACK SQUADRON

The pilots and mechanics of the "Fighting 37th Attack Squadron" began to sing the popular tune "Smoke Gets In Our Eyes" after the seven-day trip to the Infantry Training School. Captains McLennan, Grussendorf and Lieut. Qualm flew three A-8's on two smoke missions per day per ship and laid approximately 20,000 pounds of F.S. smoke. The missions were a part of the day's Field Orders, and were coordinated with Infantry attacks on an imaginary enemy. Some valuable information was gained as to efficacy of smoke under different conditions of humidity, barometer pressure and temperature. The mechanics making the trip were Staff Sergeant Byerley, Sergeant Gott and Private, 1st Class, Hankey.

Captain Grussendorf and Lieut. Qualm attacked lower Manhattan, New York, on November 6th, with more F.S. smoke. Lieut. Qualm, accompanied by mechanic, Corporal Martin, are now at Fort Riley, Kansas, doing their part to make that song, mentioned above, famous.

---oOo---

A SKY PILOT IN MORE THAN ONE SENSE.

Paging the flying sky pilot! "Here," answers First Lieutenant (Chaplain) Stanley J. Reilly, spiritual adviser to over 800 men at Hamilton Field, San Rafael, Calif., Uncle Sam's brand new, \$5,000,000 Bombardment Base on the Pacific Coast.

"Be versatile," is evidently one of the mottoes of this flying Padre, for among his many diversified accomplishments stands the record of what, for a chaplain, is a considerable number of flying hours. Even at this writing, the winged parson is riding high in the clouds, somewhere between the eastern and western boundaries of these United States, enroute to the Florida Field Exercises at Chapman Field, Miami.

Chaplain Reilly, though comparatively new to the military service, having been assigned as chaplain for Hamilton Field and the 7th Bombardment Group on January 31, 1935, has already demonstrated his keen interest in flying and ready assimilation of the peculiar duties necessarily contingent upon a chaplain assigned to a flying unit by putting in what is believed to be more actual flying hours than any chaplain in the military service.

This theological eaglet will return to Hamilton Field on or about December 20th, completing a coast to coast trip by air which started on November 29th.

---oOo---

The regular monthly conference and luncheon at the San Antonio Air Depot of officers of Air Corps stations in that Supply Control Area was held on December 3rd, some fifteen officers attending.

V-6923, A.C.

SUPERCHARGERS - THEIR EFFECT ON ENGINES

By the Materiel Division Correspondent

Although the supercharger of both the geared and turbo types have been in existence for a number of years, their object and operation have not been fully comprehended.

The supercharger for the internal combustion engine is being used in an effort to maintain constant horsepower delivery from aircraft engines at all altitudes and as a means of increasing sea level horsepower by using boost pressures with a corresponding decrease in engine weight per horsepower.

The purpose of a supercharger is fully or partially to restore sea level air pressure before the air enters the engine cylinders. In a broad sense, the supercharger is simply an air compressor constructed in a form suitable for use in connection with aircraft engines and designed for a capacity and compression ratio which will meet the requirements of the engine at any specified altitude. Two types of superchargers are in use at the present time, the geared centrifugal and the turbo centrifugal types. In the latter type, the power for driving is developed by utilizing the energy available in the exhaust gases, while in the case of the geared type the power is taken directly from the engine crankshaft.

In general, the purpose, irrespective of type, of all superchargers is identical. However, to differentiate the method of application, two systems are in vogue; namely, the suction and pressure type systems. These designations indicate whether the fuel is entrained in the system before or after the compressor. Whatever fuel is entrained in the air stream after the compressor, it is known as the pressure type system, and whenever the fuel is entrained in the air stream before it enters the compressor, it is known as the suction type system. A special type of fuel system is required in case of the pressure type system.

Results which may reasonably be expected from the supercharger are:

- a. Increase in power for a given engine weight.
- b. Constant power delivery irrespective of altitude.
- c. Increase in airplane ceiling by approximately 75 percent.
- d. Increase in speed proportional to constant power output and decrease in density due to altitude.
- e. Increase in maneuverability at high altitudes of all forms of aircraft powered with supercharged internal combustion engines.

---oOo---

SPECIAL NOTICE: The January 1, 1936, issue of the Air Corps News Letter will be a special one devoted to the Air Corps Training Center.

CRASH TRUCK GETS \$3,000 CHRISTENING

Inadvertently given a \$3,000 christening party when a transport hoist broke and dropped it into the briny depths of San Francisco Harbor, Wheeler Field's new crash truck is undoubtedly the proudest thing on wheels. Second proudest is Pvt. Keith W. White, of the 75th Service Squadron, as he pilots its thirty feet of streamlined crimson and silver splendor past awed Lieuts. and Capts., who stare covetously from their drab little khaki-colored and none-too-up-to-date airplanes.

Each morning the new truck is taken to the post gymnasium, not for setting up exercises, but to protect its four 50-lb. Carbon Dioxide cylinders from the sun while it is "on the line". Though any one of these four tanks of pent-up CO₂ is capable of throwing any fire for a loss, they constitute only threat #1 of fire-fighting Private White's triple threat apparatus. Threat #2 comprises a Foamite container, a 500-gallon water tank, an automatic Foamite mixer and a booster pump, capable of pumping 135 gallons of water a minute. Threat #3 includes a variety of fire extinguishers together with an array of hooks, hack-saws, bolt and wire cutters, designed for nipping baby blazes in the bud.

The new truck, officially designated "Type 100 Chemical Truck", was assembled at Holabird QM Depot, Baltimore, at a total cost of \$7,500. With its eight-cylinder, 160-horsepower Lycoming motor, it is capable of 55 miles per hour.

The development of an efficient type of crash truck for use by the Air Corps was given very serious thought by the War Department. The Air Corps in cooperation with the Q.M. Corps worked on the problem for a number of years, actual tests with various types of trucks being conducted at Wright Field. Service tests were also conducted at various fields in the United States. Impressive in appearance, it is believed the new truck will be even more impressive in action and will fill a long felt need at Air Corps stations.

---oOo---

BOMBING BY THE 37TH ATTACK SQUADRON

Bombing at 1,000 feet with live bombs, the 37th Attack Squadron, Langley Field, Va., has dropped close to 800 bombs with successful results. Trouble was experienced initially with duds, but at the present writing a large percentage of high order explosives are occurring. Master Sergeant Nero and his men have the loading system well perfected, and dropping one hundred bombs with four ships in two hours is not unusual.

---oOo---

Due to the lack of properly equipped airplanes for making weather observations at Selfridge Field, Mich., the weather flight was discontinued on November 21st by authority of the Chief of the Air Corps.

PROMOTION OF ENLISTED MEN, AIR CORPS.

It is believed opportune at this time that a few remarks should be made on a subject which is naturally much discussed among the enlisted men of the Air Corps - promotion to the higher noncommissioned grades. First of all, it is considered appropriate to mention the large numbers of authorized noncommissioned officers in the first three grades in the Air Corps. Almost 1400 noncommissioned officers are authorized in the third grade alone. As 318 Technical Sergeants are allocated to the Air Corps, there is naturally a large eligible list for appointment to the second grade. In recent years efforts have been made to obtain a larger number of Technical Sergeants and considerable progress has been attained, so that at the present time more Technical Sergeants are authorized than Master Sergeants. At one time the reverse was the condition.

The Air Corps enlisted strength has practically doubled since the Air Corps Act of 1926. This growth, at times, has been rather rapid, and often it was necessary to organize new units with no additional grades and ratings. At other times grades and ratings were made available which did not necessarily fit then existing needs.

In the early days of the Air Corps reliance was, to a considerable extent, placed upon noncommissioned officers who had had previous experience and training in other arms and services. In each case these transfers were approved by the Air Corps officers who were responsible for the promotion of Air Corps enlisted men. It was difficult during our expansion to adopt a satisfactory uniform system of promotion to the higher grades. Few losses in such grades were then occurring by retirement. In later years, however, retirements became more numerous, and in 1932 final measures were taken toward a uniform system of promotion to Master and Technical Sergeant.

In brief, this system, with which many readers of the News Letter are familiar, is based primarily upon efficiency and total Army service. In order for noncommissioned officers to be placed on the respective eligible lists for promotion to Technical and Master Sergeant, after basic eligibility is established, they must be recommended for promotion by their commanding officers. It is well to remember that an enlisted man in the Air Corps is promoted to the grades of Corporal, Sergeant and Staff Sergeant upon the recommendation of his commanding officer. Examinations were formerly given with a view to determining the fitness of each enlisted man to be placed on the eligible list for promotion to the next higher grade. Such examinations

were conducted by various boards consisting of officers with widely different views as to marking and naturally influenced by the associated duties of those men undergoing examination. Large eligible lists resulted, and many eligibles were perhaps not fully qualified to perform the duties of the next higher grade. Even had these examinations been of real value there was no definite means of differentiating between various individuals given the same marks by different examining boards. It finally devolved upon the Office of the Chief of Air Corps to determine the order of promotion of several hundred Staff Sergeants scattered over the continental United States and in the overseas Departments on many different kinds of duties. Complete records were not available to permit the establishment of a just priority.

The present system places the responsibility for establishing lists of eligibles squarely upon the shoulders of those who should assume it, and the quality of our present and future Technical and Master Sergeants is the answer as to how their responsibilities are and will be met. The plan appears to be fundamentally sound, assuming that commanding officers exercise their proper functions in recommending their most efficient noncommissioned officers for promotion.

In this connection, it may be well to mention a matter which is perhaps being overlooked to a certain extent. This is the provision in the promotion regulations that commanding officers will give opportunity, during the five-year period required to establish eligibility, for noncommissioned officers to enlarge upon their experience, in order that when they arrive at the time for promotion they will have broadened their experience along all lines. Noncommissioned officers qualified for administrative duties should, during that period, be given the opportunity of becoming familiar with technical duties and other specialties. In other words, noncommissioned officers of the higher grades should not be limited to one trade or specialty, but should be trained and fitted for other important duties and responsibilities and should, above all, be leaders of men. Therefore, it should not necessarily be expected that each individual Master Sergeant, for instance, will be a skilled mechanic or specialist, but men of this grade in the Air Corps should be qualified to supervise and direct the work of subordinates in a manner to effect and maintain maximum efficiency, and thus they should be assigned to important and responsible duties commensurate with their grade.

It is felt that the few opponents to the present system will gradually see the wisdom and fairness of such a plan of rewarding efficiency and length of service. It tends to stimulate promotion, as few master sergeants are remaining in the service after obtaining credit for thirty years' service. The promotion of eligible Technical and First Sergeants with long service naturally creates more vacancies and results in the steady promotion of qualified Staff Sergeants to the second grade. If younger and more vigorous men received these promotions, as might generally be the case with another system, promotion to the higher grades would be blocked for many years, and likewise retirement in the higher grades would not be as frequent. Every man naturally looks forward to the time when he will reach the higher grades and remain there by loyal and efficient service and then to retire in the highest grade possible when the time arrives. It cannot be expected, however, that every noncommissioned officer will be able to retire as a Master Sergeant or Technical Sergeant.

A few of the younger and efficient noncommissioned officers have stated that, despite their personal objection to such a system whereby they must advance by length of service, they have a sense of security in the grade in which they are serving and in ultimate promotion when they reach the top of the eligible list. It encourages them to put forth their best efforts to establish and retain eligibility for promotion with a view to filling normal vacancies or a block of vacancies which might occur by the allotment of additional grades. Those men with less total Army service see and realize that the work and service of their comrades and associates of longer service are rewarded and that they, too, as they grow older and more experienced, will receive the same just rewards so long as they put forth their best efforts. It is thus felt that with the passing of each year the wisdom and fairness of the present promotion plan will be realized by those who have felt critically inclined.

A recent publication of the War Department (Circular No. 21, W.D., 1934) has caused the feeling among some that there is a conflict between the Air Corps promotion circular (No. 35-2, A.C., 1932) and the War Department circular mentioned. Such is distinctly not the case. There is no conflict between the two publications. The War Department circular in question does not authorize promotion upon completion of the service mentioned; it prohibits promotion when the service is shorter than that mentioned in the circular. Its purpose, as subsequently stated by the War Department, was to restrict, not

to extend, the practice of promotion immediately prior to retirement. The War Department has further stated with respect thereto that it does not affect any rules now existing or hereafter adopted as to length of service or proficiency qualifications necessary for promotion.

The present system of promotion in the Air Corps has resulted in the recent advancement of certain staff sergeants with long service to the grade of Technical Sergeant. Those so promoted who do not have the required service in grade for promotion to Master Sergeant should not and must not expect any waiver of the rules for promotion to Master Sergeant, any more so than they would countenance waivers toward promotion to Technical Sergeant when they were serving as Staff Sergeants. They should remember that their length of service may have been the determining factor in their advancement to the second grade. Most of these men are below fifty years of age. They usually have knowledge and experience valuable to the Air Corps, and, if qualified, may continue in the service if they so desire until the required service in the second grade is secured toward promotion to Master Sergeant.

While on the subject of the promotion of noncommissioned officers, it seems appropriate to mention that regulations recently issued by the War Department pertaining to the examination and appointment of Warrant Officers, provide that the names of successful candidates will be placed on the eligible list in order of length of service in the Army. The fact that a decision was reached to so appoint qualified candidates as Warrant Officers strengthens the conviction that the present system of promotion to the higher noncommissioned officer grades in the Air Corps based on efficiency and length of service is fair and equitable.

No doubt a number of our qualified noncommissioned officers will in the coming examinations for the warrant grade be found qualified and ultimately receive appointment. When such appointments are accepted their vacancies will be filled by qualified men from the respective eligible lists for Master and Technical Sergeant. It is logical that most of the applicants from the ranks of the Air Corps will request allocation to this arm. In the past it has been impossible to obtain an allotment of sufficient Warrant Officers to meet the needs of the Air Corps. The Five-Year Program specifically provided for an increase in officers and enlisted men, but it was not possible to obtain any increase in the authorized number of Warrant Officers. As a matter of fact, it has not been possible to obtain a sufficient number to take care of losses. Efforts will be continued, however, to obtain needed additional Warrant Officers especially with a view to continuing in the Air Corps as many as possible of those

from its ranks who will receive appointments as Warrant Officers.

---oOo---

27TH PURSUIT SQDN. IN WING CONCENTRATION

Led by Major Warren A. Maxwell, the 27th Pursuit Squadron, with 28 P-26A airplanes, departed from Selfridge Field on the morning of December 2nd to participate in the Second Wing GHQ Air Force concentration at Miami, Fla. The C-24 Transport, piloted by Major Harlan T. McCormick and carrying four enlisted men, departed on Sunday, December 1st, for Miami, via Wright Field, Ohio, and Atlanta, Ga. The Pursuit planes were scheduled to take the same route. The following officer-pilots composed the Squadron: Captains Robert C. Oliver, Norme D. Frost, Lee Q. Wasser, Dixon M. Allison, Yantis H. Taylor, John M. Sterling, John F. Egan, Walter E. Todd, Karl G.E. Gimmier, Paul M. Jacobs, Rudolph Fink, Daniel C. Dohleday, Hanlon H. Van Aulken, 1st Lieuts. William J. Bell, Charles H. Andersin, 2nd Lieuts. Arnold T. Johnson, Edward S. Allee, Lester S. Harris, Harold L. Neely, Eugene Brecht, Jr., Henry B. Fisher, John O. Neal, Harold L. Kreider, William T. Hudnell, Jr., Lawrence O. Brown, Watson M. Frutchey and Allan T. Bennett.

---oOo---

NOTABLES PRESENT AT QUARTERLY TEST

The 18th Pursuit Group, Wheeler Field, T.H., was honored by the presence of the Honorable George H. Dern, Secretary of War; Major-General Hugh A. Drum, Commander of the Hawaiian Department; Major General Halstead Dorey, Commanding General, Hawaiian Division, and Colonel Delos C. Emmons, 18th Wing Commander, at the quarterly test and inspection of aircraft, held in the form of a tactical exercise at Wheeler Field on October 2d.

The tactical exercise of the quarterly test involved the use of targets which simulated combat conditions as nearly as possible. Bombing was conducted upon a target composed of surveyed trucks simulating an enemy ammunition train defended by anti-aircraft machine guns. Twenty-five pound fragmentation bombs were employed, being released from an altitude above 800 feet. Machine gun firing was conducted in formation against three airplane silhouette targets placed to represent a flight of attack airplanes on the ground.

The bombing was conducted by squadrons in a column of single airplanes, and the machine-gun firing from a column of three airplane elements.

A complete photographic record of the exercise was made by the 11th Photo Section, taking aerial shots of the bombs at the time of impact and of the machine

gun targets before and after firing by each squadron.

After the completion of the mission, an examination of the targets gave satisfactory evidence of the effectiveness of available equipment and type of attack employed. Fragments of the small bombs had completely cut spring shackles from the trucks, and others ripped large holes in the steel bodies and chassis, and badly cut up the engines and tanks. The machine-gun targets were practically destroyed by the forward machine-gun fire.

The firing and bombing exercise was conducted on the Schofield Barracks Combat Range near the Waianae Mountains. The surrounding mountainous terrain injected a mental hazard during the machine-gun firing which contributed to the realism of the exercise.

Despite the excellent results accomplished, the test, in the opinion of the News Letter Correspondent, conclusively proved the immediate need of more modern aircraft and additional radio equipment. As conducted at Wheeler Field, the Quarterly Tests have become a very valuable and interesting training exercise as well as a splendid test of the status of equipment.

---oOo---

4TH SQDN. FLIES AROUND SOUTHERN ISLANDS

The 4th Observation Squadron, utilizing nine O-19 airplanes, accompanied by a Douglas Amphibian, left Luke Field, T.H., on the morning of November 16th for a three-day flight around the Southern Islands. Molokai was visited on the first day, landings being made at the three fields. While landing at Brant Field, the last one visited that day, a tail wheel of the Amphibian was broken during taxiing. In the course of the next five hours, while waiting for repairs to be made, the Fagan Ranch was visited and explored. The first night was spent at Upolu Point (Suiter Field) and the second at Kilauea Military Camp, where the entire party was conducted on a sight seeing tour of the craters. On November 18th, the Squadron returned to Luke Field, via Maui and Lanai. The trip covered over 600 miles, and the fact that no trouble was experienced with the airplanes speaks highly for their maintenance.

---oOo---

Five Coast Artillery officers from Fort Kamehameha, T.H., took a two weeks' contact course with the 4th Observation Squadron, Luke Field. Lectures were given on the various Air Corps activities and tactics. The officers took part in various tactical missions, such as aerial gunnery, photography, infantry reconnaissance, etc.

OBTAINING CARBURETOR SETTINGS

By the Materiel Division Correspondent

When a contract is let for the procurement of engines for airplanes, tests are started at once to determine the carburetor and setting to be used for the particular type of installation. Tests are conducted at the engine manufacturer's plant under conditions which simulate the conditions of flight, in regard to load conditions and temperatures. Essentially these tests consist of determining the engine mixture strength requirements and from these data the desired fuel metering curve of the carburetor can be established.

It is then necessary to try various combinations of metering jets and air-bleeds to obtain performance from the carburetor which will furnish the correct mixture, previously determined by mixture control calibrations to the engine. When the setting in the carburetor, which meets the desired metering curve, is determined, the data obtained are forwarded to the Materiel Division for approval. If the requirements of the specification are met, the carburetor used for the test is considered the master carburetor, and an Air Corps setting designation and carburetor manufacturer's stocklist are assigned covering the carburetor and setting.

The master carburetor is then forwarded to the carburetor manufacturer where a complete calibration is made in the carburetor test chamber, using the same conditions of air flow and throttle settings as were used during the engine calibrations. The results obtained from this calibration usually conform very closely with the results obtained on the engine. From this calibration the inspection limits are established for the production carburetors of this type and setting. Throughout the flight operation range the production carburetors must be within two per cent of the master carburetor for acceptance. Production carburetors are then forwarded directly to the engine manufacturer for installation on the engine and the master carburetor is forwarded to the Materiel Division for inspection and calibration.

The carburetor is then calibrated in the carburetor test chamber under the same conditions of air flow, pressure drop, and throttle setting obtained at the engine manufacturer's plant. The results are usually very close to those obtained on the engine, and, if any unsatisfactory performance is observed, an investigation is immediately made to determine the cause.

The carburetor is then completely dismantled and inspected. Any unsatisfactory conditions are called to the attention of the engine manufacturer for cor-

rection and a check of the variables in the carburetor setting is obtained. This same information is also furnished by the carburetor manufacturer to prevent any errors in determining these settings. It is also published in a specification sheet which forms a part of Technical Order 02-1-18.

The calibration of the master carburetor is retained for comparison with the carburetors which are submitted by the service in connection with unsatisfactory reports.

---oOo---

ACTIVITIES OF 4TH OBSERVATION SQUADRON

The 4th Observation Squadron, stationed at Luke Field, T.H., engaged in the month of October in various tactical training missions which consisted of Aerial Gunnery on towed and ground targets for enlisted gunners, and towed targets for Coast Artillery officers who were taking a contact course with the Air Corps. Other activities included instrument flying, aerial photography, day and night reconnaissance and radio communications.

A week's practice on the pistol range was conducted, the entire squadron participating. Eight enlisted men qualified as Expert Aerial Gunners to fill the allotment of gun positions, with Private, 1st Class, E.J. Mason obtaining high score for the course with 1075.

Numerous cooperative missions were flown with the Coast Artillery, towing targets for both anti-aircraft and machine guns. In addition, this Squadron performed two observation missions with the 35th Infantry and one communication mission with the Hawaiian Division.

---oOo---

RETIREMENT OF 1ST SERGEANT FLEMING

A formation of all of Kelly Field's troops was held on the morning of November 30th, in front of the Post Operations Office, at which time 1st Sergeant John L. Fleming was formally retired. Colonel Jacob E. Fickel, the Commandant; Lieut.-Colonel H.H.C. Richards, the Assistant Commandant of the Advanced Flying School, and all organization commanders were present at the formation. Captain W.H. Hardy, the Adjutant, read the retirement order.

Sergeant Fleming entered the service on February 25, 1904, was assigned to Company C, 30th Infantry, in which branch he served until Feb. 24, 1907. For the next six years he served with the Coast Artillery. He reenlisted in the Infantry in December, 1913, served continuously therein for nearly 10 years; was with the Quartermaster Corps for over two years; reenlisted in the Air Corps July 12, 1926, and served continuously therein until his retirement.

Sgt. Fleming was congratulated on his good record.

50TH OBSERVATION TOURS HAWAIIAN ISLANDS

The 50th Observation Squadron, stationed at Luke Field, recently made a tour of the Hawaiian Islands, leaving Oahu at 8:00 a.m. on a Wednesday with seven O-19's and one OA-4A as a safety ship. The personnel consisted of Major L.V. Beau, commanding; Major J.D. Barnwell, Medical Officer; Lieuts. R.A. Stunkard, C.W. Phillips, J.C. Cochran, J.M. Chappell, J.P. Stewart, E.F. Signer, M. Bonner; Technical Sergeant W. H. Williams; Staff Sergeants A.R. Klein, S.G. Kolb and C. Langston; Corporals J.P. Pendleton and J.W. Allison; Privates R.F. Russell and Whiteside.

The first landing was made at Homestead Field, Molokai, and fifteen minutes later the flight took off for Kalaupapa, Molokai, where once again a landing was made. From this point the flight proceeded to Brant Field, Molokai; Hanna, Maui, and to Upolu Point, Hawaii, where the planes were serviced and the Radio Department acted as the culinary detail of the flight, serving a delicious lunch comprising the old standby - "Ham and -"

The Flight Commander inspected the facilities for emergency activities. This station appeared to be in excellent condition, the result of hard, earnest labor, exercised by the permanent personnel there, commanded by Sergeant Hoffert. Taking off at about 2:00 p.m., the flight, after passing many miles of scenic beauty along the coast, reached Hilo Airport, where all airplanes were staked for the night. All of the personnel were then taken by the Kilauea Military Camp bus on that long, long trail of 35 miles to the camp. It was unanimously agreed that the trip by the bus over such a narrow road and with such speed was more exciting than the flight over the channel. Private "Barney Oldfield" at the wheel must have been laboring under the impression that his passengers were out for a thrill. The overnight stay at the Military Camp was very pleasant and the men were quite comfortable, although overcoats could have been utilized to good advantage.

On Thursday morning the personnel enjoyed a personally conducted tour of the Volcano Area by Mr. Williams, Chief Forester of the Section. He disclosed many secrets of Her Majesty, Madam Pele. The tour was greatly enjoyed by all members of the party. At 11:00 a.m., after a light lunch, the return trip was started over the long, narrow trail to the Hilo Airport. Take-off was made at 1:30 p.m., but, due to inclement weather south, the flight returned to Upolu Point for the night.

Friday morning found the flight well on its way to South Point, Hawaii. After a brief inspection of the field and

its facilities, preparations were made to return to Upolu Point. It was found, however, that a magneto in an O-19 had given up the ghost, whereupon the Squadron Commander immediately dispatched the Amphibian to Oahu, where a magneto was picked up and flown back to South Point. Unmindful of sundry remarks indulged in by various members of the group, Corporal Pendleton secured the new magneto in place within 30 minutes, and the flight then proceeded to Upolu Point and remained there Friday night.

Early Saturday morning, the flight took off for Maalaea, Maui; thence to Lanai City, Lanai, and Homestead Field, Molokai, where some rare pineapples were enjoyed in their natural state before the tax is placed on them. The flight landed at Luke Field at 12:15 p.m.

This flight afforded excellent training for the participating personnel, and the entire organization is looking forward to another flight of this nature in the near future.

---oOo---

RECORD MASS FLIGHT ACROSS THE CONTINENT

Flashing across the United States like migratory birds heading south for the winter, 29 Martin Bombardment planes of the 7th Bombardment Group (Provisional) made what is believed to be a record for mass flight when they landed at Vero Beach, Fla., in the elapsed time of 21 hours and 50 minutes. This record includes stops for servicing at Biggs Field, Fort Bliss, El Paso, Texas; Barksdale Field, Shreveport, La., and Maxwell Field, Montgomery, Ala.

Starting off from March Field on December 1st, at 3:15 p.m., Eastern Standard Time, the planes arrived at Vero Beach the following day at 1:40 p.m., E.S.T. Although the journey presented little difficulty in the way of bad weather, the 24 hours without sleep was an unusual strain on the personnel.

The purpose of the flight was to ferry the planes to the State of Florida for participation in the exercises of the General Headquarters Air Force at Vero Beach and Miami. While in Florida the planes were scheduled to fly in spectacular exercises before thousands of spectators at the Miami National Air Races.

The nonchalance with which the press of the country accepted the flight indicated how quickly the American people are becoming accustomed to airplane feats.

No attempt was made to establish a cross-country speed record for mass flight. One of the objects of the air hegira was to demonstrate how quickly all of the modern Army airplanes on the West Coast could cross the American continent and come to the rescue in the event of an attack on the east coast by a foreign power.

O B I T U A R I E S

Major George E. Rice and 1st Lieut. Harry H. Geoffrey, Air Corps, were instantly killed in an airplane accident near Bolling Field, D.C., on the morning of December 4th. The officers were flying an O-43 Observation plane from Mitchel Field, N.Y., and were preparing to land when the plane crashed.

Major Rice was born in Basin, Wyoming, January 18, 1898. He enlisted in the 133rd Aero Squadron, Aviation Section, Signal Corps, August 23, 1917. Appointed a Flying Cadet, he took his ground school training course at the University of California, and his flying course at Chanute Field, Ill. Upon passing the required tests, he was given his R.M.A. rating and was commissioned a second lieutenant, June 26, 1918. In July, 1918, he was transferred to Camp Dick, Dallas, Texas, and the following month to Brooks Field, Texas. He served for brief periods at Dayton, Ohio, and at the Aeronautical General Supply Depot, Garden City, N.Y., and in January, 1919, he was transferred to Rockwell Field, Calif., where he served for nearly a year as personnel adjutant and officer in charge of forest patrol work. In January, 1920, he was transferred to Hawaii, where he served with the 2nd Observation Squadron at Luke Field. Later he served with the 23rd Bombardment Squadron.

Upon his return to the United States, he was assigned to duty (January, 1923) at Kelly Field, Texas, serving successively with the 41st and 43rd School Squadrons until October 11, 1927, when he was transferred to March Field, Calif. In August, 1929, he was transferred to Fort Sill, Okla., where he served with the 16th and 88th Observation Squadrons.

In January, 1932, Major Rice was assigned to duty in the Panama Canal Zone, where he served with the 63rd Service Squadron and the Panama Air Depot. On November 1, 1933, he was promoted to Captain. On his return to the United States in June, 1934, he was assigned to Mitchel Field, N.Y., where he served with the 5th and 97th Observation Squadrons and the 5th Bombardment Squadron. On April 20, 1935, he was assigned to command the 97th Squadron with the temporary rank of Major.

Major Rice is survived by his widow, Mrs. Dorothy Wendell Rice, and two daughters, who reside at Mitchel Field.

Lieut. Geoffrey was born in St. Paul, Minn., December 19, 1906. Enlisting in the 3rd Infantry on June 30, 1925, he served with this regiment for one year, when he entered the U.S. Military Academy. His graduation from West Point in 1930 was followed by his appointment as a 2nd Lieutenant of Field Artillery. He served with the 18th Field Artillery

at Fort Des Moines, Iowa, from June 22, 1930, to September 30th of that year, and at Fort Snelling, Minn., to October 8, 1932, when he was detailed in the Air Corps for flying training. Upon his graduation from the Air Corps Training Center, October 14, 1933, he was assigned to the 1st Observation Squadron at Mitchel Field, where he was last stationed. From February 27 to April 30, 1934, he was on duty as air mail pilot.

Lieut. Geoffrey is survived by his widow, Mrs. Fredericka Mertens Geoffrey, and one son, residing at Mitchel Field.

Second Lieutenant Karl W. Bauer, Air Corps, died as the result of an airplane accident at Muroc, Calif., December 2, 1935.

Lieut. Bauer was born in Jefferson City, Mo., February 8, 1910. He entered the U.S. Military Academy on July 1, 1930; was graduated and commissioned second lieutenant of Infantry, June 12, 1934, and then assigned to the Air Corps for flying training. Upon the completion of his flying course and graduation from the Advanced Flying School, Kelly Field, Texas, on October 12, 1935, Lieut. Bauer was assigned to duty at March Field, Riverside, Calif. He is survived by his widow, Mrs. Marjorie D. Bauer, residing in Riverside.

Second Lieutenant Eyvind Holterman, Air Corps, flying instructor at Randolph Field, Texas, died on November 24, 1935, as the result of an airplane accident 20 miles southwest of Columbus, Texas.

A native of Norway, Lieut. Holterman was born on June 9, 1907. He received his education in San Francisco and Berkeley, Calif., attending high school and the Galt Tech., Jr., college in the first-named city, and the University of California, Berkeley, for three years, graduating in May, 1932, with the degree of Bachelor of Science.

Appointed a Flying Cadet, he completed the course at the Primary Flying School at Randolph Field, Texas, February 28, 1933, and the advanced course at Kelly Field, Texas, June 29, 1933, on which date he was rated "Airplane Pilot" and "Airplane Observer," and commissioned a second lieutenant in the Air Reserve. Lieut. Holterman was on active duty at Crissy Field, Calif., with the 91st Observation Squadron, for a period of twenty months, following which he enlisted as a Private in the Air Corps, took the examination for a commission in the Air Corps, Regular Army, and realized his ambition. Following his permanent appointment, he was assigned to duty as flying instructor at the Primary Flying School at Randolph Field. He was not married, and his nearest relative is his aunt, Miss Bergatta Hoe, of San Francisco.

The heartfelt sympathy of the Air Corps is extended to the bereaved families of these deceased officers.

PARACHUTE JUMPS

All of the drama incident to flying over the Panamanian jungles during the rainy season was vividly typified on November 20th, when the Panama Canal Department's only Amphibian airplane lost most of its right engine in the vicinity of Ocu, Republic of Panama. For what is believed to be the first time in the history of the Air Corps in the Department, communication at Albrook Field was continuous from the time the descent began.

The Amphibian, returning from a trip to the Island of Coiba, was forced to turn on account of a tropical storm along the coast line and was sailing peacefully along at an altitude of 4,100 feet, dodging in and out among the clouds, when at 10:45 a.m., Captain Frank A. Armstrong, the pilot, checked his instruments and noted that everything was functioning perfectly.

There was a sudden noise, a thud against the cowl of the pilots' cockpit, a tremendous vibration, and Captain Armstrong looked to the right over the head of Captain James H. Wallace, who had ducked down when the propeller struck the cockpit, and saw that the right propeller and part of the engine was gone.

Captain Lindsay M. Bawsel was talking over the Amphibian's 187 set to the Albrook Field Station when the engine left the airplane. He dropped his microphone, the button wedging against a seat, thus leaving the Albrook Field Station in contact with the comments of the personnel of the "Duck."

Captain Bawsel moved without delay to the rear hatch and proceeded to become a second degree member of the Caterpillar Club. A little over six years ago, on November 4, 1929, he received his first initiation at Chanute Field, Rantoul, Ill. Major R.D. Prescott, Signal Corps Reserve, followed him to the now open hatch. He didn't like the looks of the country below, so he gave way to Sergeant W.R. Tanner, who proceeded with his Caterpillar Club initiation. Calmly adjusting his leg straps, Major Prescott took another look out and spied a native hut for which he made a dive.

In the meantime, Captain Armstrong, making a wide circle, had lost only 300 feet altitude. Captain Wallace announced that he would ride the ship down with the pilot and attempted to close the open hatch, but was unable to do so.

At the ground station, listeners-in at the loud speaker had heard Captain Wallace checking the parachute jumpers as they left the airplane. In a few moments Captain Wallace announced that the ship had landed safely.

Stories of airplane accidents in Panama are far from complete, however, when all parties have reached the ground, for they may be in the jungles or a swollen river, so frantic efforts to make contact with the three jumpers were immediately inaugurated.

Lieut.-Colonel Charles T. Phillips, Command-

ing Officer of Albrook Field, immediately dispatched Major Frank O'D. Hunter, with a flight of three airplanes, to aid Captains Armstrong and Wallace in an effort to locate and gain contact with the parachute jumpers. The flight landed safely at Ocu, alongside of the "Duck," and information was secured as to the approximate position in which each jumper was believed to have gone down. Major Hunter then took off, made a brief search before a heavy rain storm came up, and was then forced to return to the field. Landing with the wind which was bringing the rain storm along, he found that the application of brakes did no good on the water-soaked turn on which he landed, and the P-12 went on its back in a gully. Major Hunter declared that the ravine was the drainage point both for the native town of Ocu and the field which was occupied normally by a large herd of cattle.

In the course of a couple of hours, Major Prescott, who is the Director of Communications for the Republic of Panama, reported in by telephone, and also gave the welcome news that he had seen Sergeant Tanner on the ground and that he was uninjured. Sergeant Tanner had landed on the opposite side of a swollen river and Major Prescott could talk to him, but they were four hours apart from the standpoint of actual contact. The search for Captain Bawsel continued until dark, when there was nothing left to do but to abandon it for the time being, despite the fact that his comrades were fearful that he had been injured during the course of the jump and was parked somewhere in the jungles with only wildcats and boa constrictors for company.

The tension was relieved at about 7:00 p.m. that night, when Captain Bawsel called Col. Phillips from the town of Santa Maria, stating that he had traveled for two hours on foot to reach a native hut, and then for seven hours on horseback to reach a telephone.

A new engine has been flown to the field at Ocu to repair the Amphibian, as the roads to that locality will probably be impassable until the wet season begins to wane. The P-12 will be surveyed and destroyed at the scene of the accident.

---oOo---

While piloting a BT-2B1 weather observation plane, Captain Norm D. Frost, Air Corps, was forced to bail out at about 1,200 feet, due to engine failure and fear of fire. He was making daily weather observations and was about twelve miles southeast of Romeo, Michigan, about 6:00 a.m., when the accident occurred. The plane crashed into a freshly plowed corn field not far from Wolcott's Mill at Ray Center and was completely wrecked. Captain Frost drifted to earth with his parachute about a mile from the wrecked plane, landing in a hay field. He was uninjured.

Ascending to an altitude of 17,000 feet to make his daily observations, Captain Frost

V-6923, A.C.

stated that at that point he smelled smoke, but placed little importance on the fact because he believed it was caused by the carburetor. He then headed for Selfridge Field, having completed his observations, and had descended to an altitude of 1,200 feet, when he saw the oil pressure instrument suddenly register zero. Hoping to be able to reach the field and make a safe landing, Captain Frost stuck to the controls. However, the motor quickly stalled and there was nothing left for him to do but take to his parachute. The airplane was a complete loss.

This was not the first time Captain Frost yanked the ripcord of his parachute and glided down to safety, his first initiation into the Caterpillar Club occurring almost seven years ago (December 4, 1928) when he was serving a tour of duty in the Hawaiian Department. That first initiation Captain Frost will probably never forget, what with his plane being in a fast spin, everything a whirling blur; several of his fingers caught fast in the metal loop of the safety belt buckle and acting as a wedge which prevented the loop slipping through the other half of the buckle and releasing him from the plane; his final frantic, and this time successful, effort to tear his imprisoned fingers loose; his instant ejection from the plane like a rock from a catapult; his inability for several fleeting and very valuable moments to find the ripcord of his parachute in its accustomed resting place and his welcome discovery thereof up under his arm pit; his landing near the edge of a gulch and the hard jolt he received on striking the ground and falling backwards.

Other recent additions to the roster of the Caterpillar Club are set forth below, as follows:

While on a ferry flight in type SOC-1 plane from Anacostia, D.C., to San Diego, Calif., Lieut. L.C. Simpler, U.S. Navy, encountered rain and a low ceiling in the vicinity of Clanton, Ala., November 19th, and was forced to resort to his parachute when his gasoline supply became exhausted.

On October 12th, while on a weather observation flight, Captain Raphael Baez, Air Corps, stationed at Scott Field, Ill., was forced to "bail out" from an altitude of about 6,000 feet, when his gasoline supply became exhausted. He left Scott Field at 4:00 a.m. on a flight which was to have lasted an hour and thirty minutes. Encountering "soupy" weather, Captain Baez attempted a landing at the Chicago airport, but the fog was so heavy that he could not find the field. He deserted his plane when about $4\frac{1}{2}$ miles north of Chillicothe and landed in a tree on a farm, a mile away from the place where his plane crashed. He was badly shaken and shocked, and suffered cuts and bruises. Extricated from the tree with the help of a farm-hand, he was able to walk with assistance and was taken to Peoria, Ill.

Corporal H. W. Fisher, of the 14th Photo Section, Mitchel Field N.Y., made a parachute jump shortly after 5:00 o'clock on November 10th from a plane flown by Sergeant G.E. Layman. A fog was encountered in the vicinity of Flemington, N.J., and the visibility was not more than fifty feet. It appears that Sergeant Layman shouted to his companion: "Get ready, you might have to bail out." Corporal Fisher, however, thought that Sergeant Layman ordered him to jump, and over the side he went. At that time the plane was over a valley, between Croton and Quakertown, about seven miles from Flemington. Corporal Fisher missed a patch of woods and came down in a field from which he could see the lights of a farmhouse. He made his way to the home of the farmer, who took him to the state police barracks in Flemington. Fearing for the safety of Sergeant Layman, Corporal Fisher urged that a teletype alarm be sent out for the plane. A reply was received almost immediately to the effect that Sergeant Layman, emerging from the thick fog, got his bearings and landed at Mitchel Field at 5:40 p.m.

-----oOo-----

DELAYED FIRE - PURSUIT SHIP DESTROYED

Taking off to the south from Selfridge Field on a recent training flight at 7:45 p.m., the engine of the P-26A airplane which Captain Robert C. Oliver was piloting failed at an altitude of about 300 feet. The pilot made a 180° turn, struck a gable on a building near the Jefferson Avenue bridge just south of the field, cut down a tree of eight inches in diameter, bounced over a ravine, and finally stopped right side up without injuring himself, except for a minor scratch in the palm of his hand. After getting out of the ship he had walked a short distance, but being unable to see in the darkness, he went back to the ship and secured a flashlight and then started toward the road. When about fifty yards from the airplane, it suddenly burst into flames, and what remained of the airplane was completely destroyed by fire.

-----oOo-----

ACTIVITIES OF THE 72ND BOMBARDMENT SQUADRON

The 72nd Bombardment Squadron, Luke Field, T.H., recently completed seven cooperative missions for the troops of the Harbor Defenses of Pearl Harbor. As these missions are flown at an altitude of 10,000 feet, one would hardly believe that the airmen were stationed in the tropics after noting the amount of clothing and equipment used for these missions.

On October 28th, 29th and 30th, the Squadron completed an Inter-Island training flight to the Islands of Hawaii, Maui, Molokai and Lanai, landings being made on all of these islands. The first night was spent at Hilo, Island of Hawaii. Some of the personnel seized the opportunity to visit the Hawaiian National Park. The second night was spent at the auxiliary field at Upolu Point, Island of Hawaii. Twelve officers and 31 enlisted men participated in this flight.

BOARDS CONVEENE AT WRIGHT FIELD

Various Boards have been in session at the Materiel Division, Wright Field, during the past month, namely, the Communications Board for the purpose of submitting recommendations for and approval of aircraft radio communication equipment; the Navigation Board for similar action on air navigation equipment, and a Bombardment Board convened for the purpose of taking action on the Douglas and Martin Bombardment airplanes submitted in the August 22nd Procurement Competition.

The Communications Board, called for November 19th, was composed of Major C.H. Howard, of Langley Field, Va.; Captains A.W. Marriner, Office of the Chief of the Air Corps; M.N. Stewart, Langley Field; T.H. Baxter, Barksdale Field; L.H. Watnee, March Field; L.D. Frederick, Crissy Field, and W.G. Smith, Wright Field.

The Navigation Board, called for November 22nd, was composed of Major W.T. Larson, March Field; Captains A.W. Marriner and J.S. Griffith, Office of the Chief of the Air Corps; Captain C.J. Crane, Wright Field; Lieuts. H. F. McCaffery, Langley Field, and T.L. Thurlow, March Field.

The Bombardment Board, called for December 2nd, consisted of Lieut.-Col. C.B. Oldfield, Major John Whiteley and Major E.L. Eubank, Langley Field; Lieut. Colonel H.L. George, Maxwell Field; Major W.T. Larson, March Field, and Captain F.O. Carroll, Wright Field.

---cOo---

FLYING INSTRUCTOR QUICK ON THE TRIGGER

Lieut. Charles F. Densford, Air Corps, flying instructor at Kelly Field, Texas, recently won the San Antonio fall pistol championship by making a clean sweep of every match on the program. The match was conducted by the Liberty Pistol and Rifle Club. The first event consisted of 30 shots, slow fire, at 25 yards. Lieut. Densford's scores were 99, 98 and 99, or 296 out of a possible 300. In the second event, 30 shots in timed fire, his scores were 98, 98 and 95, or a total of 291 out of 300. The third event, consisting of 30 rounds rapid fire, was easily won with scores of 100, 95 and 95, or a total of 290. The last event, 30 shots at 50 yards, was won by a narrow margin, Lieut. Densford's scores being 90, 87 and 95, or a total of 272, while H.M. Cline, a civilian competitor, scored 96, 84 and 91, or a total of 271. Lieut. Densford's total score of 1149 out of a possible 1200 points is considered an exceptionally good record for match competition. He led his nearest competitor by 35 points. In 1932, Lieut. Densford won the Texas State Championship and, continuing at this rate, should again win this prize.

WAR DEPARTMENT ORDERS AFFECTING A.C. OFFICERS

CHANGES OF STATION: To Maxwell Field, Ala.: Colonel John N. Reynolds, 19th Composite Wing. Relieved from temporary rank effective upon date of departure from Panama.

To Brooks Field, Texas: Major Harold G. Petersen, 65th Service Squadron. Relieved from temporary rank upon date of departure from Hawaii. - 1st Lieut. William G. Beard from Hawaii.

To Bolling Field, D.C.: 1st Lieut. Arnold L. Schroeder from Hawaii.

To Fort Sill, Okla.: 1st Lieut. Hulian M. Chappell, from Hawaii.

To Governors Island, N.Y., for duty at Headquarters 2nd Corps Area, pending retirement, Major William D. Wheeler, from Hawaii.

PROMOTIONS: To Lieut.-Colonel, with rank from December 1, 1935: Majors Benjamin G. Weir and Ralph Royce.

---cOo---

TRAINING FOR RESERVE OFFICERS AT BOSTON

The following Training Directive for Reserve Officers, which has been put into effect by Captain Walter E. Richards, Commanding Officer of the Boston Airport, East Boston, Mass., and of the First Corps Area Air Corps Detachment, has greatly stimulated interest:

Required:

- 200 miles air navigation.
- 200 miles air navigation.
- 250 miles air navigation.
- 35 hours air navigation.
- 5 hours instrument (under hood).
- 10 hours instrument (total).
- 2 hours night (air navigation).
- 10 hours night (total).
- 5 hours formation.
- 100 hours allotted.

The total flying hours completed at the Boston Airport for the Fiscal Year 1936 amounts thus far to 1,934:25, of which 933 hours are credited to Regular Army personnel and 1,001.25 hours to Air Reserve personnel.

---cOo---

SELFRIDGE PERSONNEL JUDGE MODEL PLANE CONTEST

Nine Flying Cadets and nine noncommissioned officers, stationed at Selfridge Field, Mt. Clemens, Mich., acted as judges of the model airplane contest of the Junior Birdmen of America, held on November 29th at the Coliseum of the State Fair Grounds in Detroit.

---cOo---

The 23rd Bombardment Squadron at Luke Field, T.H., is now flying two 2-hour periods when engaged in night flying. Using a 4-hour night and sometimes flying two nights a week, the Squadron expects to complete the fifty hours of night flying per officer called for by the Group Training Directive. Although handicapped by bad luck and lack of airplanes, the Squadron is first on the field in amount of training completed.



AIR CORPS FIELDS

Luke Field, T.H., November 23, 1935.

4th Obs. Squadron: Major Pritchard having been appointed Commanding Officer of the Hawaiian Air Depot on Oct. 21st, Captain Jack W. Wood has been acting Squadron Commander. Capt. Fay R. Upthegrove returned from Kilauea after a two weeks' stay and took over the command of the Squadron.

With the ushering in of the basketball season, the championship 4th Squadron is prepared to repeat. Led by Corp. Sadler, the team has been working hard and is rapidly approaching mid-season form. In the two indoor baseball leagues, the Squadron has not fared so well - losing all of its games.

23rd Bombardment Squadron: While taxiing on Kahuku Field, Lieut. William C. Capp hit a lava bubble, breaking the landing gear, causing the plane to fall on the lower right wing and washing it out. The plane is being taken care of by the Hawaiian Air Depot.

Several promotions were recently announced. Emerson, with the 23rd for eight years, went from Sergeant to Staff Sergeant. Corporal Charles H. Culpepper became the junior sergeant and Carl E. Young the new corporal.

The basketball team was so disconcerted by the appearance of Logan, a former 23rd star, on the 65th team, that they did not begin clicking until the last quarter. By that time the lead was too great to overcome, and the 65th won 30 to 21.

Lieut. John K. Gerhart, former engineering officer of the Squadron, was made Post Adjutant, his duties being taken over by Lieut. Byram A. Bunch, Armament Officer.

An informal Aloha party to Privts. Colton, Overmyer and Clark was given by the Squadron in the mess hall. All responded with brief speeches when called on by the Toastmaster, Master Sergeant Brockway.

After losing to the 65th Service and the 4th Observation Squadrons, the basketball team defeated the 72nd and 50th Squadrons in such a convincing manner that the second round of games promise to be real battles. The team has been hitting the basket with regularity and playing together much better than when the season started.

Bad weather prevented the Squadron making the annual trip around the outlying landing fields.

72nd Bombardment Squadron: Best wishes are extended to the new Squadron Commander, Major Idwal H. Edwards, who arrived on the last transport. Everyone hopes the Major will like his new assignment.

Langley Field, Va., December 7th.

On November 18th, the 37th Attack Squadron was happy to congratulate Captains McLennan and Grussendorf on their promotion in rank from 1st Lieutenants. From the rank of second lieutenants, Air Reserve, Allison and Sutherland changed to Privates in the Regular Army. It seems that Army flying has that grip which holds.

Flying Cadet Bennet acquired the distinguishing prefix to his name of "Eagle Eye." It is not only due to his prowess at hunting, for he did bring home a wild turkey while gunning with buckshot for a deer, but his ability to pick up camouflaged planes. When the 35th Pursuit Squadron painted their planes and covered them carefully with branches, Cadet Bennet located them and informed the Group by radio to complete the mission.

When the Eighth Pursuit Group basketball team won their seventh game on November 5th, by defeating the 59th Service Squadron 38 to 25, they clinched the Langley Field Athletic Association Intermural League title for the Pursuit Group.

A total of 12 games were to be played in carrying out the League schedule. The 19th Airship Squadron was forced to forfeit two of their games due to being transferred to the West Coast. One other team dropped out early in the season, making four games won by forfeit, one lost to the 59th Squadron and 7 won in contests. Clean sportsmanship and stiff competition were encountered in all League games. A rousing cheering section, liberally sprinkled with Pursuit Group officers, was a contributing factor in the winning of the title according to members of the team.

The Pursuit Group Squad was composed of one Flying Cadet, and enlisted men drawn from the Headquarters Detachment, 33rd, 35th, 36th and

37th Squadrons. At the completion of the schedule, the Group Commander, Lieut.-Colonel A.H. Gilkeson, Air Corps, representing the Pursuit Group team, was presented with an appropriate trophy by the Post Recreation Officer. Members of the squad included Flying Cadet Bennett, Sergeant Everett, Corporals Olson and Hollick, Privates Harvey, Stryjak, Goodman, Miller, Ackerman, Engleman and Dombrowiak.

Hamilton Field, San Rafael, Calif., Dec. 3.

Seven second lieutenants reported for duty from the Air Corps Advanced Flying School on October 28th, viz: John B. Cary (CE), 69th Service Sqdn.; Paul C. Ashworth (CE) and Harvey T. Alness (Cav.) 11th Bomb. Sqdn.; Byron E. Brugge (CAC) and Dale O. Smith (Inf.) 9th Bomb. Sqdn.; Jack E. Shuck (CAV), 31st Bomb. Sqdn.; and Herbert M. Baker, Jr. (Inf.) 70th Service Squadron.

Master Sergeant Harry Beck, formerly with the 29th Pursuit Squadron, Albrook Field, Canal Zone, was assigned to the 70th Service Squadron.

Technical Sergeant Edwin D. Thomas, 70th Service Squadron, was ordered to the Philippines as replacement for Technical Sergeant Carl G. Lantz. Sergeant Thomas sails from San Francisco on January 22nd, 1936.

The semi-annual examination to determine eligibility of applicants to hold the rating of Air Mechanic was held on December 2nd.

While fishing on the rocks at Point Bonita on the Fort Baker Military reservation on Tuesday, December 3d, Private Gerald F. Griner, 31st Bomb. Sqdn., was carried to his death on the jagged rocks when a huge wave swept him into the sea before the horrified eyes of his companions, Privates Oliver R. Kamstra and Irving W. Young. Private Griner, a native of Watertown, S.D., is survived by his mother, Mrs. Etta M. Griner of that city.

At this writing the body has not yet been recovered, and the Coast Guard is still patrolling the waters of San Francisco Bay in an effort to locate Private Griner's remains.

Selfridge Field, Mt. Clemens, Mich., Dec. 2.

Captain Oakley G. Kelly, Air Corps, of Wright Field, Dayton, Ohio, with his assistant, Staff Sergeant Frank D. Blair, arrived at the station on November 18th to conduct the semi-annual technical inspection. The Technical Inspector departed on Nov. 23rd.

San Antonio Air Depot, Duncan Field, Texas.

Major F.D. Hackett and Captain E.W. Rawlings of the Field Service Section, Materiel Division, Wright Field, Ohio, flying an O-25, arrived here December 3rd to confer on engineering and depot administration matters.

Lieut. D.M. Kilpatrick, of Langley Field, ferried in a B-6A for overhaul and returned Nov. 23rd to Langley Field, ferrying a PT-3 for that station.

Returning from a cross-country flight to Brownsville, Texas, Lieut. C.S. Irvine, of

the Engineering Section, Materiel Division, was forced down with engine trouble at Kingsville, Texas, November 23rd, and was a visitor at this Depot for several days, awaiting engine change in his O-46 plane.

Lieut. (JG) J.E. Pixton, U.S. Navy, flying a Naval Fighting Land Plane from the Naval Air Station, Norfolk, Va., to his home station at San Diego, Calif., stopped at this Depot on November 25th while en route.

Mr. William Klingan, representative of the Pratt & Whitney Aircraft Co., called at the Depot on Dec. 2nd for a few days' visit, conferring on engine maintenance problems.

Boston Airport, East Boston, Mass., Dec. 9.

Recent visitors here were Major Robert Olds, Lieut. G.L. Govoni, Cadets Bennett, Pearson and Junger, from Langley Field, Va.; Major F.B. Valentine and Capt. Wenstrom from Bolling Field, D.C.; Captains T.E. Cheattle, P.T. Cullen, Howard Moore, Lieuts. H.A. Cheney, G.W. Pynchon, C.A. Gayette, H.P. Luna, Cadet Nelson and Pvt. Borden, Mitchel Field; Capt. O.R. Cook, West Point, N.Y.; Capt. C.H. Deerwester, Privts. Camp and Joyce, Middletown Air Depot, Pa.; Capt. J. F. Early, Armstrong and Lieut. B.S. Kelsey, Wright Field, O.; Lieut. E.G. Kiehle and Cadet Dunlap, Selfridge Field, and Lieut. A.J. Hedding, U.S.N., Anacostia Naval Air Station.

Capt. R.R. Brown and W.E. Richards, of the First Corps Area Air Corps Detachment, completed their training schedule for the Fiscal Year 1936.

After a few weeks' delay, due to repairs on the C-3A, the weather flights at Boston have been resumed.

The Reserve Officers of the Detachment, during November, have flown, as follows: Hours - Majors Nestor, 1:10; Raymond, 1:00; Captains Clark, 6:50; Copland, 1:30; Crowley, 1:15; Fogg, 8:05; Holterman, 5:30; Lusk, 8:25; Nagle, 2:35; 1st Lts. Harlow, 5:05; Hopkins, :55; Ingels, :45; Newhall, 1:55; Orr, 3:00; Pearson, 4:30; Sandow, 4:30; Smith, 12:40; White, 2:25; 2nd Lts. Altenburg, 7:50; Aigeltinger, 2:40; Harrison, 4:35; Halstead, 21:05 and Tanner, :30.

Richards Field, Kansas City, Mo.

The following-named Reserve officers of the 7th Corps Area received 14 days' active duty at this station during the past month: Capt. G.T. Long, 1st Lieuts. James E. Derby, J.N. Peyton, J.C. Cox, Weldon E. Rhoades and 2nd Lt. T.A. Davis.

A total of 42 planes landed at this station in the past month. Among our visitors were Major Spry, Hamilton Field; Capt. Williams, Bolling Field; Major Connell, Bolling Field; Major Houghland, Marshall Field; Captains Craigie and Smith, Wright Field; Major Burgess, Chanute Field; and Colonel Pitts, Offutt Field.

We wonder if other stations are doing as much "boning up" for the Warrant Officers' exams. as is going on here. Our one and only applicant has been studying everything from Grimes' First Reader to Decisions of Appellate Court for 1899, and still doesn't know what it's all about. Any suggestions will be studied in the order received.

V-6923, A.C.

Hawaiian Air Depot.

Lieut.-Colonel Frank H. Pritchard assumed command of the Depot. His predecessor, who departed for the mainland on October 29th, was given a great send-off by his many friends in the Hawaiian Department. A large delegation went down to the boat and gave Captain and Mrs. Page a typical Hawaiian "Aloha." This popular couple was well known and liked in civilian circles, as well as among Army and Navy personnel, all of whom will wish them much future success. Captain Page goes back to his old stamping ground at the Materiel Division.

A number of civilian personnel departed on the same transport for mainland leave, including Messrs. DeVelschow, Bauman and Kunz from the Engineering Section, and Miss Fay Northrop and Mr. Edgar S. Barry from the Supply Section.

Captain Charles E. Branshaw, who arrived on the CHATEAU THIERRY on October 23rd, and assumed the duty of Engineering Officer, has plunged into his work with much zest and interest. He has had many years of experience along depot engineering lines, and was formerly engineering officer at the San Antonio Depot.

The Depot was recently visited by the Inspector General and his staff for purpose of inspection.

The work of re-roofing the main Supply warehouse is progressing rapidly despite the advent of the rainy season. The completion of this much needed improvement will be a relief, as the condition of this roof was such that valuable stock was endangered during each rainfall.

The heads of both the Engineering and Supply departments are making every effort to secure additional buildings for this Depot. From information on hand, it appears that it will be approximately four years before we can move into the new depot building at Hickam Field.

The Depot supply department is expanding every day in order to provide space for proper supply levels. Large stocks of new supplies have been arriving at frequent intervals, and considerable quantities are enroute or on order. Noticeable improvement in quantities of supplies received and action taken by the various supply agencies, through which requisitions from this Depot pass, has been noted. The flow of supplies resulting from concentrated effort of all concerned is highly satisfactory. The Materiel Division, as well as the Rockwell Air Depot, cooperated with the Hawaiian Air Depot in splendid fashion in bringing stocks up to the proper levels.

A revised system of handling part shortage sheets between Engineering and Supply has been initiated with favorable results. The Engineering Section has established a central unit to handle all part shortages. This unit works very closely with the Depot Supply Section. These part shortages are given priority by the stock tracer, and immediate action is taken to obtain articles not available.

At this writing an epidemic of influenza has seized the Depot, causing considerable pilikia (Hawaiian word for trouble).

The best Hawaiian Air Depot picnic in the history of the organization was held at Kailua, Oahu, on October 19th, and was attended by over 500 people. Every kind of entertainment was offered, including games, sports, dancing and swimming. Many valuable prizes were awarded as a result of donations by Honolulu commercial concerns. This was another innovation this year, and was much appreciated, particularly by the winners of the various events.

TECHNICAL INFORMATION AND ENGINEERING NEWS

Air Corps Materiel Division

Floodlights. - Three representatives of the Westinghouse Electric & Manufacturing Co. (one from Cleveland, O.; one from Cincinnati, O., and a local representative, visited the Materiel Division regarding floodlights to be used as a substitute for the present Air Corps Type A-9B, in order to overcome the deterioration prevailing in the present Air Corps Type A-9B floodlights using glass mirrors. The Cleveland representative recommended the use of metal reflectors constructed of aluminum and treated with the Alzac process. This process, the secrets of which were originally held by the Aluminum Company of America, consists of placing a thin oxide film over the polished surface. This film prevents discoloration and makes the reflecting surface entirely impervious to heat and moisture. No special care need be taken in cleaning this type reflector, as it is not easily scratched. The Westinghouse Company will submit a sample reflector to the Materiel Division for photometric test in the near future.

Wind Cones and Danger Markers. - An Engineering Section Memorandum Report, covering the results of investigation of information received from Service activities pertaining to increasing visibility of wind cones, stated that, in view of the number of activities recommending changes in the present method of marking, a limited quantity of wind cones containing 3-inch black stripes will be procured for service test. Due to the small size of the danger markers, a combination of colors would be impractical; therefore, no changes should be made on danger cones, danger flags, markers, etc.

Wind Direction Indicators. - An Engineering Section Memorandum Report was prepared to record results of service test of Types B-5 and B-6 wind direction indicators at Randolph Field, Texas, and to provide information for reclassification of the Type B-5 as Standard and the Type B-6 as Limited Standard.

The Type B-5 indicator is tetrahedral in shape, 36 feet long, with an equilateral triangle 15 feet on a side at the leeward end, and is balanced so that the apex heads into the wind.

The Type B-6 indicator consists of a large tee, 36 feet long, with a 22-foot wing spread and a triangular fin 14 feet high, and was designed to provide a conventional tee with improved side visibility.





